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CLINICAL LECTURES.

THE VALUE OF MODERN WOUND TREATMENT, JUDGED BY THE RESULTS OF LAPAROTOMIES.

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Gentlemen:—We stand to-day under the influence of one of the most powerful discoveries that has ever come within the domain of medicine; a discovery which is destined to largely re-model our science on a new basis. But the experiences with Koch's fluid have as yet been far too limited to admit of any final or definite criticism. While at this opening lecture to you, I feel that it is impossible to let this subject go by unnoticed, yet I will content myself with giving you, at the close of this lecture, the results of a few cases treated with this remedy. In the meantime we will turn our attention to the consideration of another discovery, which in its turn has almost completely re-modelled surgery, and has of late made its potent influence also strongly felt in the field of internal medicine. I refer to the so-called Listerian treatment of wounds.

The key-notes of the modern treatment of wounds are found in the words "antisepsis" and "asepsis." While we for several years past, have spoken of an "antiseptic condition" the term of late seems to have given place to that of "aseptic condition." With what justification this has been done it shall be our task to consider.

Pathogenic germs can infect wounds in two different ways, either through the circulation, or from without. We distinguish, therefore, "self-infection" (the much used word "auto-infection" is a misnomer,) and "infection from without." Regarding the first, as it only can occur under very exceptional conditions, we will not discuss it here.

In infection from without, the pathogenic germs either come from the air, or else they are brought into the wound by the contact of solid or fluid bodies. The views entertained regarding the comparative frequency of these two means of infection have undergone considerable modification. While Lister, basing his views upon the experiments of Pasteur, was of the opinion that the air was the principal means for the carrying of infection, and that, therefore, before this air came in contact with the wound it must be disinfected, these views were opposed on purely practical grounds at first by German surgeons—V. v. Bruns, and others— until finally it was scientifically demonstrated, that no real importance could be attached to the supposed dangers of aëreal infection. Fritsch, of Breslau, was one of the first who disclaimed the necessity of making any provisions in the operating-room against possible aëreal infection, and held such procedures as forcing the onlookers to remove their coats, or to undergo a compulsory washing, as not only unnecessary, but laughably absurd. In the meantime, gentlemen, I hesitate from going so far. Nature has so many ways, and ways which are most difficult to follow, by which she cares for the lives of her most minute offspring, that it surely does not seem justifiable to completely ignore any reasonable proposition or precaution. Can it really be immaterial whether the garments of the students which have possibly come directly from contamination in the dissecting room,—can it be really immaterial, I repeat, whether these germ laden garments are brought into a room where major operations are being performed, or perhaps even large cavities of the body are being opened? Should the often unavoidable crowding of the room, by which mechanically, by the rubbing of garment against garment, the germs are set free and wafted in the air, be looked upon as a procedure entirely devoid of the possibility of causing traumatic infection, so long as the immediate participants in the operation have

taken every personal precaution to free themselves and the patient from infection? Truly, I think not. And, therefore, I still feel constrained to abide by my old rules, and request that the students attending my clinics shall not attend them in the same clothes in which they also visit the institutes of anatomy and pathological anatomy. And further, that in especially dangerous operations, the students present will kindly put on the clean white over-alls which I will provide for their use.

How that may be, however, it is evident that the principal source of traumatic infection, and indeed almost the only source, is actual contact with germ-laden articles. That the skin of the patient should be scrupulously clean, that the operator, his assistants and the attendants should wear no clothes of questionable cleanliness, that the instruments, sponges, hands, and indeed everything which comes in contact with the wound should be absolutely clean or aseptic, is well known, and cannot be too strongly impressed. The greatest danger, without doubt, lies in the nails of the hands; Schede, Kuemmell, Fuerbringer, and others, having demonstrated the fact that numerous pathogenic germs are found both under the nail and around the matrices, and these germs can only too easily lead to an infection of the wound. The trustworthiness of a surgeon nowadays, may be largely determined by the care which he bestows upon the cleanliness of his hands and nails. Especially in major operations too much care cannot possibly be taken. The method which Fürbringer has empirically shown to be of value, deserves imitation, because it at least insures safety to a large, although in no way absolute, degree. It is as follows: The hands and nails should first be mechanically rendered as clean as possible, both by means of a sharp knife (for the nails) and a brush with which the hands and nails are both scrubbed with hot soap and water. Then the hands should be soaked for several minutes in alcohol, and finally immersed in a solution of bichloride of mercury. Mikulicz besides all this, concludes by rubbing iodoform under the nails and around the matrices. With these precautions, it is obvious that the possibilities of traumatic infection are reduced to a minimum.

All instruments and sponges that come in contact with the wound, in fact everything that touches it, must be most carefully cleaned. sterilized, and rendered aseptic. Formerly, we used to disinfect our instruments by immersing them in a solution of carbolic acid, of say 5 per cent., for about an hour before the operation, and from which they were only removed as required. What is far more reliable, is a boiling of the instrument in a weak soda solution. For this purpose we use the apparatus made originally by Lautenschläger of Berlin. The sponges—which by the way, I greatly prefer to tufts of gauze or cotton—are first thoroughly cleaned, and then placed in porcelain jars filled with a 5 per cent. carbolic acid solution. These jars are labelled with the day of the week, so that in choosing a jar, we take one marked with the day the operation is being performed on, and are thus sure of the sponges having at least been soaked for a week in the disinfecting fluid. Also the dressings, sutures, ligatures and even bandages should be prepared with the greatest care. They should be sterilized in an oven by heat, and it is also well to impregnate them afterwards with some antiseptic, such as thymol, iodoform, or others.

A wound treated thus aseptically, a wound which has thus been kept free from every pathogenic germ, must and will take an aseptic course, that is to say, that it must heal by first intention without the formation of one drop of pus. According to this, therefore, asepsis is without doubt the ideal which every surgeon strives for.

This is more true than the ideal theory of antisepsis, held until recently. For, antisepsis as it was originally practiced, offered many difficulties and inconveniences. I may recall to your mind that strict antisepsis, as it was first practiced necessitated a continual irrigation of the wound with an antiseptic solution; that this gave place to an occasional washing of the wound during the course of the operation; this in turn to a douching of the wound just before its closing. But even this mild use of antiseptics is not without danger. None of these germicidal substances are without properties which can be directly injurious to the organism, whether the substance be carbolic acid, or bichloride of mercury, or iodoform, or salicylic acid. In part they occasion regional and general specific symptoms, which may lead to a fatal termination; nearly all exert a harmful action upon the kidneys. This is caused because these substances, after having been absorbed into the circulation, are eliminated through the kidneys, and there cause a peculiar degeneration of the renal epithelium, which when even occurring in a small degree is most harmful to health, and which when severe leads to uræmia and death. To these possible sequellæ must also be added the widely

varying susceptibility found in different subjects, to the action of antiseptics. A moderate dose of iodoform or bichloride of mercury, which in twenty patients could be administered without causing the least unpleasant symptoms, may, in the twenty-first case, give rise to toxic symptoms of extreme gravity. We are, therefore, not in the position to rely without questioning upon the results of the employment of any toxic antiseptic. There is scarcely a surgeon, who, if having used antiseptics extensively, cannot report fatal casualties as resulting from their use.

Theoretically, therefore, there can be no doubt but that the practice of antisepsis should yield to that of asepsis; let us now, therefore, briefly see whether this theory can be supported by practical results.

Even the most careful surgeon is not always in the same quiet harmony with his patient; he is—as is every man—subject to sickness and health, to moods and feelings, which may be, in a certain measure, independent of internal or external influences. Hereby is already occasioned a certain variance of the aseptic attitude. This possible variance is only increased when more than one person comes in contact with the patient. The surgeon is also influenced by the surrounding conditions even possibly more than from his own disposition, and no matter how great his skill, or how careful his method, still, a certain amount of uncertainty will cling to all human actions, and the possibility of mistake, by omission or commission remains open. It is, therefore, a very natural wish, that taking all these possibilities into consideration, the surgeon would desire to correct all possible mistakes by careful disinfection before the closure of the wound.

Herein is expressed the first limitation by which we are confronted in the aseptic treatment of wounds.

A second limitation for this method is found in the fact that we do not always have to deal with wounds inflicted by the surgeon at the time of the operation, but frequently with old wounds, and wounds sustained in every conceivable manner. In such cases an infection of the wound has already occurred, and at present we have no other method at our control than careful disinfection with antiseptics.

A third limitation is found in the fact that we are frequently compelled to operate in such regions of the body where it is impossible to maintain asepsis for any length of time. Wounds of the oral cavity, of the genitalia, and of the intestines, would—in the majority of the cases—not remain aseptic by the mere use of aseptic preparations. In such cases both the dressings and bandages would gradually become infected, and the use of antiseptics cannot be dispensed with.

A fourth limitation is the difficulty in obtaining the necessary material and assistance in general practice and in times of war, on the field of action. Even in a well-ordered clinic, or cleanly kept hospital, it is often difficult to avoid all mistakes, how then is the country practitioner, without the necessary apparatus for sterilization, and without competent assistants, to compete with the results obtained in the well organized clinics? And if this is the case with the average practitioner in times of peace, how is it with the surgeon on the battle-field in times of war? Both must of necessity be satisfied with obtaining the ideal aseptic conditions only so far as it is in their power to do.

If therefore, gentlemen, asepsis is not universally applicable in surgery, then asepsis should not be excusively taught. In this clinic you will, therefore, be taught both methods, with the hopes that you also may become conversant with the minutiæ of both. It will also be my pleasure to demonstrate to you why at one time I use the one method, and at another time the other; and why, at times, a combination of both asepsis and antisepsis. It is the knowledge of the various remedies, and the ability of being able to pick the ones suitable from them, that makes the successful and skilful physician. There exists no such a thing as "luck" in surgery, in the sense expressed by the great Russian surgeon Pirogoff, but every result of to-day can be based on knowledge and ability.

Let us look about us, therefore, to see and note the results of the application of these fundamental principles, choosing for this purpose a groupe of operations which constitute the most delicate test. I refer to laparotomies.

The first laparotomies were performed at the time when all the profession was agog with wonder over the brilliant successes following the introduction of antiseptics. At that time it was thought impossible to over-do the most stringent application of the method. Von Nussbaum, of Munic, one of the most enthusiastic and worthy introducers of general antisepsis, who only a short time since has been lost to the profession by death, poured his carbolic acid solution by the bucketful into the abdominal cavity, and

ascribed the subsequent collapse, which was only prevented from being fatal by means of artificial respiration continued for hours, not to the action of the drug but to other reasons. At first slowly, but then ever more rapidly the danger of the adoption of such procedures, especially in a cavity of the body, the absorptive power of which could so quickly carry the poison into the general circulation, became realized. But the consideration that the abdominal cavity possessed peculiar anatomical conditions, rendering any infection here much more dangerous than at any other portion of the body, still caused antisepsis to be held in laparotomies longer than in perhaps any other surgical procedure.

We know now that the peritoneum is able to withstand the inroads of several different infectious germs, but only under two conditions; one being that there shall be no large collection of fluid which may serve as a culture medium for the germs, and the other being that in case the germs do propagate with rapidity the displacement of the blood or serum over the entire abdominal cavity by means of peristalsis will prevent the further propagation of the germs in isolated foci.

More important, therefore, than in any other operation is the strictest observance of asepsis in laparotomies necessary. Antiseptic drugs should either not be used at all, or else in the most limited manner possible. The results which Fritsch has obtained with sterilized salt and water solution are absolutely conclusive as to the justifiability of this. In 52 laparotomies he lost only two cases, and neither of these was from sepsis. At the same time, in order to obviate possible errors, or if they occur to render them of as little danger as possible to the patient's life, it is of the highest importance to keep the abdominal cavity dry from all blood or liquids capable of putrefaction or infection.

An important help towards this end is the elevation of the pelvis, recently suggested by Trendelenburg, at least in laparotomies the operative field of which is in or near the small pelvis. This procedure not only gives a much better view of the operative field, but it also occasions a far smaller hæmorrhage than when the patient is laid horizontally. By this elevation the veins of the pelvis are so nearly emptied, that the troublesome parenchymatous bleeding which otherwise frequently occurs, is almost entirely absent.

In the following tables I give the results of a number of laparotomies performed by me at my private clinic, and in the Augusta Hospital in Berlin, during the last one and three-quarter years. In these cases I followed the rules I have endeavored to lay down in this lecture, relating to asepsis, but have also used antiseptics with caution as the case seemed to indicate. The list comprises 60 cases in all.

Exploratory laparotomies, for various causes,—9 cases; 9 recoveries.

Ovariotomies (some of which were most difficult)—18 cases; 18 recoveries.

Salpingectomy, for pyosalpinx,—2 cases; 2 recoveries.

Myomotomy,—6 cases; 2 recoveries; 2 deaths (2 from sepsis, 2 from bichloride of mercury poisoning.)

Vaginal hysterectomy,—3 cases; 2 recoveries; 1 death (from hæmorrhage.)

Echinococcus of the abdomen, (liver, and pelvic mucous membrane),—3 cases; 3 recoveries.

Extirpation of a sarcoma mesocoli,—1 case; 1 death (from sepsis).

Incision of a pancreatic cyst,—1 case; 1 recovery.

Operations on the gall-bladder and gall ducts,—3 cases; 2 recoveries; 1 death (from phthisis pulmonalis).

Laparotomy for ileus (internal strangulation),—3 cases; 2 recoveries; 1 death (from internal strangulation).

Laparotomy for bullet wound of the abdomen,—1 case; 1 death (from sepsis).

Colotomy,—4 cases; 4 recoveries.

Gastrotomy,—1 case; 1 death (from inanition).

Gastro-enterotomy,—5 cases; 1 recovery; 4 deaths from varied causes, but none from sepsis.

Total,—60 cases; 46 recoveries; 14 deaths.

From these fourteen fatal cases let us subtract those which were not attributable to the treatment of the wound: the one gastrotomy, the four gastro-enterotomies, the case of ileus, that of phthisis, and that of hæmorrhage. There remains therefore, 6 fatal cases attributable to the treatment of the wound, and among these, 4 cases of sepsis. One of the latter must also be subtracted from the list, as you will readily admit when you hear the history of the case, which I will detain you by giving briefly.

The patient was a student, twenty-one years of age, who had sustained a bullet wound of the abdomen in a duel. The ball had entered the abdomen to the right of the navel, had passed through the pelvis and could be easily felt through the skin of the buttock, from which it was removed. The

young man was very anæmic and his abdomen was evidently full of blood. Laparotomy was immediately performed and a large quantity of blood found in the abdominal cavity. The intestines were found perforated at four different places, and the mesenterium at four other places. All the openings were sewed up and the abdominal cavity carefully cleaned. The patient died 36 hours after the operation. The autopsy showed a circumscribed septic infection in the region of the ilium, and in its center the cartridge case was found, which must have been torn out of the revolver with the bullet and had passed through the pelvis only stopping when it came in contact with the bony obstruction. This unforseen accident had caused the unfortunate man's death.

Even if we exclude this case there will remain three cases of sepsis and two of bichloride of mercury poisoning. In the two latter cases only a small amount of the drug was used, and that was used with the greatest possible precaution. From the results of these cases I have determined to use no antiseptics in abdominal sections unless absolutely necessary. You will, therefore, see me hereafter perform all typical laparotomies in a purely aseptic manner.

In conclusion I might refer at length to several of the cases given in the table, in which the operation was attended with most excellent results, and which in themselves were of more than ordinary interest. But for lack of time I must reserve this pleasure for some future lecture it having only been my intention in this discourse to clearly point out to you the fundamental principles of our modern method of treating wounds, with a brief glimpse at their results in certain test cases, and upon these principles I propose to work before you. Allow me therefore, to request your participation in my clinical work.

GENERAL PARESIS.

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A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

Gentlemen:—I have taken as the subject for this lecture a few of the more important forms of insanity. I have considered that a large Hospital like Blockley, in a medical center like Philadelphia, and the only Hospital in the city that presents an opportunity for the demonstration to students of mental disease, should not go unutilized. It goes without saying that the subject of diseases of the mind is extremely important to the practitioner of medicine. No apology is required for bringing a subject of such importance before the students who will become the general practitioners, and who in nearly all instances are the first to see the patients in the incipient stages of these diseases. It will fall upon you to recognize the beginning stages of nearly all of these mental diseases and it is of the first importance not only to your reputations as practitioners but also to the welfare of your patients and the community, that you should be able to detect the little flaws which mark the beginning of the often irretrievable ruin of the mind of your patient.

Insanity is not a specialty to be studied only within the walls of an asylum. As a disease of the highest organism in nature it often confronts, and must always claim the interest of the educated physician everywhere.

Among the most important of these diseases is the one which I have selected for consideration to-day. Not only is it one of the most important but it is one of the most interesting of the diseases of the mind. I refer to general paresis. This has many synonyms. It is alluded to as general paresis, dementia paralytica and general paralysis of the insane. These three are the leading designations. General paresis is the term I have chosen as it is probably the one most frequently used. This affection has been well called the scourge of civilized man. We have in all of the lower races and classes of man more or less prevalence of mental disease, but this particular affection seems to be reserved for those who are thrown into the competition and struggle for life in our great civilization. This disease belongs more especially to our manufacturing and commercial centres rather than to the agricultural and rural districts and it is best displayed in the higher types of man. This reminds me to say that we do not find the best examples of general paresis in hospitals for the pauper insane. I could show you much better marked forms in some other hospitals of the city and State, but we must content ourselves with the material that we have. The important fact in the ætiology of the disease is that it is found best developed in highly civilized and developed men,—those who bear the great burdens and take the front rank in the complicated life of our civilization. Hence it is

that we often see the disease best developed in railroad men or professional men. One of the most marked examples that I have seen was in a high official of one of our large railroads. I have seen other examples in lawyers, physicians, actors and politicians; in other words, in men who take upon their shoulders great responsibilities with incessant mental strain.

Having said so much by way of introduction, let me ask what is general paresis? I shall first tell you what it is anatomically, and pathologically, so that as we develop its symptomatology you can, as it were, fit in the symptoms as they arise. General paresis is a wide spread degenerative disease of the cerebro-spinal axis affecting especially the cortical matter of the brain, although not confined to it. In its progress it involves also the cord and even the nerve trunks and the sympathetic system. The degenerative changes involve especially the brain cortex. The disease spreads like a slow fire destroying little by little the important and essential anatomical structures of the brain. This consequently leads to the greatest variety and complexity of symptoms, although these symptoms usually pursue a more or less typical course and admit of a ready diagnosis being made. This degenerative disease of the brain is probably an exhibition of over strain.

We know that the nutritive supply of all organs is under the control of what is termed a vaso-motor system. This system has control of the proper blood supply and nutrition of the parts. In this particular disease we probably have as the initial cause overstrain and loss of the equilibrium of the vaso-motor nervous system. This leads to a flushing of the capillaries and to a too rapid growth and nutritional change. This gradually leads to cell-proliferation, especially in the net-work of tissue which acts as a stroma or scaffolding to support the essential elements of the brain,—the cells and nerve fibres. This overgrowth of tissue leads to a form of sclerosis. This connective tissue overgrowth slowly leads to a blotting out of the nerve elements. Hence the disease has as its essential characteristic, progressiveness. When it once starts it continues and I have yet to see a well authenticated case of cure. It gradually leads to a perversion, and then a destruction, of all the more important functions of the brain and of the cerebro-spinal axis. We can say of general paralysis that a well-marked case, if followed from beginning to end, becomes a walking museum of pathological specimens and a whole hospital ward of clinical neurology. Some one has said there is scarcely any disease of the nervous system that is not more or less displayed by the general paretic before the disease terminates. This is a subject which it is difficult to condense in the limits of an hour, but with the assistance of the patients, who are present, I shall endeavor to give you a statement of the whole process.

One word in regard to your position as practitioners of medicine with reference to this disease. I have said that the general practitioner is the one who first sees the insane patient. There is no case of insanity the recognition of which in the early stage, is more important than that of general paresis. This is, therefore, a very important subject. It is a well recognized fact that of all the insane, the general paretic in the first stage is the one most apt to bring trouble and disgrace upon himself and mortification upon his family. It is, therefore, of importance that we should recognize the prodromal stage of general paresis.

We are accustomed to divide the disease into three stages. The first is the prodromal or incipient stage. The incipient stage is marked especially by a change of character. Beginning in a man in early middle life, for this disease is apt to begin between the ages of thirty-five and forty-five years, an insidious change is observed which often is recognized first by the immediate family and friends of the patient. This change of character is very difficult to describe in words. It is a loss of the acuity of the faculties of the patient. The edge is taken off. It is marked by little lapses of memory, by indifference of the patient to his ordinary avocations; he is no longer the man he was; he no longer has the ability to concentrate his attention, and he becomes rather weak and foolish. He often becomes worse than that; he may become flagrantly wrong in his moral character. This is the period of the disease in which the individual will not infrequently bring scandal upon himself and family by theft or flagrant violations of the moral code. He may be lodged in jail for indecent assault or for stealing in a purposeless manner something that he does not want. At this period he becomes unable to apply himself properly to business. I recall one instance of a prominent business man who was constantly falling asleep in his office. This was the first symptom to attract the attention of those around him. This somnolence is not unusual in the early stages of general paresis. This man would sleep nearly all day in his office-chair and at night he would be sleepless,

disturbing the whole household. During the prodromal stage the individual becomes changed in other respects. He becomes silly and boastful in his manner, and erratic in his business and social relations. He loses his grip on his business and is no longer able to discharge properly his duties. These are the symptoms which are apt to first call attention to the disease.

At this time if a more careful study is made there will be found in addition to the deterioration of mental and moral character, beginning lesions in some of the muscular groups. Recollect that we have a disease which is insidiously working its way through the brain cortex. You have already learned that the muscular system is represented in the brain cortex. That is according to the doctrine of cerebral localization. As the disease advances, attacking here and there a group of nerve cells, it begins to show its effect upon these motor cerebral centres and certain lesions of the muscular system appear. This is marked by ataxia and paresis, which are noted especially in those muscular functions requiring fine adjustment. We note them in the eye, in the muscles of articulation, in the muscles of facial expression and in the muscles of the hand required to execute precise movements as writing, playing the piano, and certain forms of skilled manual labor. At the same time, the muscular change is apt to be seen in the patient's gait. At this time simple ataxia of walking may exist, and also lesions dependent upon some advanced disease of the spinal cord to which I shall refer later. Exaggerated patella reflexes are common.

I now pass to the second stage. This stage is so well marked that it forces itself upon the attention of every one. In this stage we have a more advanced degradation of all the mental and the moral faculties. There is an advance of all the symptoms, but the condition which is most marked is the progressive dementia. Dementia is one of the central symptoms of general paresis. Whatever variations may be seen in other symptoms, this one symptom stands out as a central one, the progressive dementia. In this second stage the patient has advanced from the condition which we call change of character to a condition of decided alienation, or insanity. He is no longer simply a changed man,—he is an insane man. The most marked characteristic of this insanity as put down in the books, although it is not always present, is the peculiar expansive or grandiose delusion. This is a marked peculiarity, the ear mark as it were of the general paretic. This peculiar type of delusion may be misunderstood. The delusion of grandeur of the general paretic is not like any other delusion which we have in the insane. It is marked by an extravagance, a "claim-all" kind of tendency which is not seen in any other form of insanity. The general paretic not only claims that he is rich, but that he is extravagantly and foolishly rich, not only that he is a millionaire, but many times a millionaire. I recall one patient who not only imagined that he was rich beyond all conception of avarice but even that the very blood which fell from a scratch of his finger was pure gold. Another told me that he had money enough to buy the whole world. The individual becomes the founder of cities. He not only founds them but owns them. One patient told me that he owned a city of four million inhabitants in the southern part of New Jersey. These persons think they are very strong in their physical development. They are men of herculean strength. They have immense influence. They can rule the world. They are able to gain any purpose that they want. They have great inventive ability. Any foolish, puerile conception that can occur to the human mind is not too extravagant. This extravagance is characteristic of the delusion of the general paretic. So extravagant is the patient that his friends believe sometimes that he is not sincere; that he is assuming his delusions. These delusions are characterized also by what in technical language we speak of as lack of system and lack of fixation. They are not systematized or fixed delusions. It is important that you should know what is meant by these two terms. Fixed delusion as the words imply is an erroneous belief which is fastened in the mind and does not change. The man clings to a fixed delusion not only from one day to the next but from one week to the next, or from one month to another or perhaps for a life time. I have known a monomaniac to adhere to one delusion for years. This is not characteristic of the general paretic. With him the wealth of to-day becomes something else of to-morrow. You can lead him by suggestion from one delusion to another. They are not fixed in his mind as are the delusions of the monomaniac. Yesterday in looking over the patients in the Hospital, I found a monomaniac who believes that he owns sixty-eight houses. He has clung to this belief for three years. He not only owns them, but he knows who built them. In one sense he is not mistaken, that is, he is not wrong in all his

deductions. He is logical. The general paretic will own sixty-eight houses to-day, to-morrow it may be sixty eight thousand houses and the next day something else. It is an unfixed delusion. These delusions are also unsystematized. An unsystematized delusion is one that is not coherent. It is not persistently and coherently held to. The delusion changes, it is not a systematized belief. The patient does not follow it to its logical conclusions. The monomaniac, who especially has systematized delusions, will act upon his delusion and keep it up for years. He will draw correct conclusions from an insane premise. The general paretic changes his delusions. He puts them on and takes them off, and does not follow them logically to their legitimate conclusions.

In addition to this peculiar form of delusion, coming in the second stage, the general paretic shows also progressive failure in his muscular system. He becomes more and more weakened in his muscular power. I have stated that in the first stage there is some progressive weakness of the eye muscles. This becomes characteristic in the second stage. Certain paralyses of the external and internal eye muscles occur. The pupil fails to re-act to light, and while it fails to re-act to light, it continues to accommodate. This is the Argyle-Robertson pupil. We see this in general paresis, although it is not so frequent as has been held. The pupil in this affection is more commonly an unequal and irregular pupil. You may have a typical case of general paresis and on examination of the eye, you will not find the Argyle-Robertson pupil, but if you look carefully you will probably find unequal pupils. An irregular pupil is also a very characteristic symptom. Instead of a perfectly circular pupil, there will be an approach to the cat's pupil, that is, an oblong pupil, or one pulled down at one point. Be careful that you do not make the mistake of considering this the result of an old attack of iritis. In iritis there is fixation of the pupil with irregularity. It is especially important to make this distinction in specific cases, for specific iritis will give you an approach to this pupil of general paresis. There may be involvement also of other muscles. Some of the recti-muscles may be affected causing strabismus, although this is not common except in the more advanced stages. Ptosis may be present. Beginning disease of the retina or of the optic nerve may be observed. A very common symptom is difficulty of articulation. This it must also be borne in mind is often a symptom of the disease in an early stage. I distinctly recall a young gentleman who came to me several years ago and told me that he had a little difficulty in his speech. He did not know what was the trouble but thought that he needed electricity applied. I did not believe this but in order to gratify him and gain time for observation I made a few applications. On careful examination I found a little ellision of syllables. He did not stammer but here and there he would drop a syllable. This annoyed him. The explanation of this was that some of the centres in the cortex were beginning to be affected. The man was under observation for some weeks until I felt positive of the beginning of the trouble. There was not another symptom except a little suspicious lapse of memory. He could not recall well and could not apply his mind to business. I had the eye ground examined and beginning optic atrophy was reported. I made a diagnosis of a very early stage of general paresis and this was confirmed by the fact that the man developed gradually well marked symptoms of general paresis and in six months was taken to the Pennsylvania Hospital for the insane. He is now well advanced in the third stage of general paresis.

Let me now call attention to the patients before you.

CASE I.—I have brought this man before you because he illustrates some of the beginning symptoms, such as lack of innervation of the facial muscles. Looking carefully you will notice a slight alteration in the face. The right side of the face is a little flattened and in addition there is a little muscular spasm. This is usually not so well seen as in this case. Here it is rhythmic and going on constantly. It may not be confined to the face. I have seen these myoclonic, almost rhythmical, shocks in the legs. The tongue is protruded in a straight line. It is an advantage in these cases to have certain test words such as agricultural, parallelopipedon, etc. You will find that the patient has difficulty in enunciating this class of words. He has difficulty in pronouncing some of the labials, linguals and dentals, and where such sounds as R, L, P, D, and T come together he will slide or slur over the words. This man has this difficulty.

CASE II.—As the disease advances there is more or less involvement in the spinal cord. There are two diseases especially which are associated with general paralysis of the insane. These are locomotor ataxia and lateral sclerosis. Here is a man whose disease was diagnosed originally as locomotor

ataxia. There is a form of general paralysis which beginning as locomotor ataxia may persist for some years, the patient being free from mental symptoms. As time advances mental symptoms may manifest themselves. This man has all the symptoms of locomotor ataxia. It is in locomotor ataxia especially that the patient has the Argyle-Robertson pupil as seen in this case. He has abolition of the patellar reflexes, fulgurent pains and an ataxic gait. When he stands with his eyes closed, he would instantly fall if not supported. This has persisted as locomotor ataxia for years, but now the man has expansive delusions. He is ready to go and rescue Ireland. He has certain other delusions, and he has a drawling or scanning speech. I think this is a case of general paresis on top of locomotor ataxia.

Case III.—Is an illustration of general paresis in the female. General paresis of a well marked type is extremely rare in the female sex. I have told you that an ætiological factor of importance is great mental responsibility on the one hand, and on the other excesses. These two factors are more prominent in the male than in the female. I do not insinuate that women never take heavy responsibilities on their shoulders, but, as a rule, they do not enter into such active competition as men, and assume the cares that crush down and render necessary the use of abnormal stimulants to keep up the strength. The man who carries upon his shoulders heavy business responsibilities and attempts to keep up his strength on alcohol is the kind of individual who is liable to get general paresis. This is so especially if he indulges in sexual excesses and contracts syphilis. Women are comparatively free from these conditions, heavy business strain alcoholic and sexual excess. This woman, about whom we know very little, has been diagnosed as a case of multiple sclerosis. I believe that she is a case rather of general paresis. She has the peculiar drawling speech seen in general paresis. Multiple sclerosis does not show such distinct mental symptoms as general paresis. This woman has very unequal pupils, the left is very much dilated while the right is normal. When she shuts her eyes you can see the muscular tremor. The pupils do not accommodate or re-act to light. This woman has also lack of attention. She can not keep her eyes on any object. She can not hold her hand out for any length of time. She shows the muscular tremor in the hands and in the muscles of speech. Her mental condition is one of advanced dementia. It is too late in her disease to see the grandiose delusion in its perfection. It may be that she has never had it: it has not been as marked in the few women whom I have seen in this disease as in men.

As this disease advances from one part of the cortex to another we have certain crises. These occur generally in the second stage of the disease. They are, first, epileptic attacks; second, apoplectiform attacks; third, maniacal attacks and fourth, certain bizarre attacks which can usually be called myoclonic attacks. The epileptic attacks of general paresis are very common and characteristic. They sometimes appear at an early period of the disease. In fact the epileptic seizure is occasionally one of the first symptoms observed by family and friends. If a perfectly strong and vigorous man of 35 or 40 falls suddenly in an epileptic attack and, when he revives, you find these slight changes in the eye, and in speech, the lack of attention and lapses of memory, you should be on your guard as to the probable beginning of general paresis. Epilepsy does not begin in middle life without a cause. We have no such thing as essential epilepsy in middle life. It then has an organic basis. You may not be able to determine it, but it is there. General paresis in most cases sooner or later displays these epileptic attacks. These attacks are rather different from those of so called essential epilepsy. In the first place the epileptic seizures of general paresis are apt to be marked by a focal character. While there may be universal convulsive attacks with loss of consciousness we are more apt to have limited attacks, with, or without loss of consciousness. I received a letter recently, from Dr. Brush, of the Pennsylvania Hospital for the Insane, asking me to come and see an epileptic attack in a general paretic. The letter came by mail, and as I supposed that by that time the attack was over, I did not go. I saw the Doctor two days later when he told me that the attack was still going on. The man was in the attack for over two days. These seizures will often continue for hours. They may begin as violent spasms and simmer down to one or two little movements. They may begin as a local spasm and gradually spread from one part to another and ultimately involve consciousness. They may continue for hours in a few muscular groups as myoclonic shocks.

This is a disease of loss of control of the vaso-motor system. This vaso-motor system

is trying to regain control, it is trying to put on the brakes, but it can never quite do it. Of this struggle we have these various clinical expressions in epilepsy and in the congestive and apoplectiform attacks in which the patient falls or lies in coma with stertorous breathing for hours, and which may prove fatal. Again, the patient may have hemiplegia or monoplegia, which if on the right side is associated with aphasia. It looks like a hopeless stroke of paralysis. In the course of two or three days or a week the weakened arm gradually regains power and the patient as it were, comes to a partly normal condition. He is apt to be left the worse, however, for every one of these attacks. Again the general paretic is subject to maniacal attacks. These are of peculiar violence. The patient raves and storms, is incoherent and has little objective consciousness. He is unable to appreciate anything about him, and is quite violent and often filthy. Great motor restlessness, rather than mental agitation, sometimes marks these attacks. The man, however, is not dangerous. The mind has lost so much of its integral part that it is unable to concentrate on a definite purpose. The patient is not suicidal or homicidal. He sometimes threatens suicide, but it is a spurious tendency to suicide. He has not concentration or power enough even to kill himself. These are important points to remember. He may, however, do a great deal of damage to property and may do injury to himself inadvertently.

We now pass to the last stage of this disease. In this stage the patient having tended constantly downwards, we have him at last, leading a purely vegetating life. Memory, mind, judgment, consciousness, ability to move the muscles properly, gone, the ability to swallow, everything gone from him, leaving him merely a vegetating mass of humanity. In this last stage, he becomes the victim of trophic disorders. Bad bed sores may form. These are difficult to manage and often contribute directly to the patient's death.

Case IV.—This man is in an advanced stage of the disease, and exhibits complete dementia. The pupils are unequal. It is almost impossible to understand him when he speaks. There is great muscular debility. He is unable to converse, to feed himself or to make known his wants. The clinical history of his case is too long to be read at present. It suffices to say that he has passed through the stages of expansive delusions, muscular and speech defects, and an occasional maniacal crisis. The patient is almost bed-ridden, and will be entirely so in a few weeks, if he survives that long.

Another characteristic of general paresis is the occurrence of remissions. Often where the disease has lasted for some time the patient will suddenly become much better, so much better that he is taken from the asylum and perhaps returns to business. His fond relatives are confident that the doctors have taken an extremely unfavorable view of his case or made a mistake in diagnosis. The patient, to their eyes, becomes practically a well man. He may have a little of the pupillary defect left, some fine tremor of the facial muscles and a little lapse of his speech, but his mental condition is improved and his friends feel that a mistake has been made. If you put such a man back to business and subject him to the strain of overwork, or even if you do nothing with him but permit him to lead a quiet easy life, he will sooner or later inevitably relapse. I never knew an exception. This phenomenon of the disease is of importance from a medico-legal point of view. Several years ago this whole community was much exercised over this very subject in the case of the sheriff of the city. He had become a well marked case of general paresis. I saw him frequently and signed his certificate, and testified before the commission which deposed him from office. The Sheriff is a very important officer, as he gives title to property amounting to many thousands of dollars a year, and draws the jurors for the criminal and civil courts. The physicians were asked by the commission whether if a remission should occur the individual would be able to execute the functions of his office. I necessarily answered "no." There was nothing to make us regard the man as even approximately recovered, while every symptom indicated that if he attempted to bear the burden of office, he would inevitably relapse. He did relapse and died in the course of a year.

Another medico-legal point arises in cases of theft and the breaking of certain moral and civil laws. It is important that in such cases the disease should be recognized in its early stage. Such individuals without any real motive and in a purposeless way which is difficult to describe, will steal objects which they do not require. The patient simply takes the article from the counter, slips it into his pocket, perhaps shows it to some one on the street, and the next day does not know where he obtained it, or what has become of it. Such persons have been

sent to jail, I believe, although not within my observation. Sexual crimes are much more common—or, at least, attempts at sexual crimes. One patient in this city made improper advances and indecent proposals to young school girls on the street at the noon hour. Of course great scandal and mortification may arise from this very common tendency in the general paretic.

COMMUNICATIONS.

ON THE CARE OF EYES DURING INFANCY AND CHILDHOOD.

BY J. WALTER PARK, M.. D.,

LATE CLINICAL ASSISTANT ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS, LONDON, ENG.—OPHTHALMIC SURGEON TO THE HARRISBURG HOSPITAL, AND CHILDRENS' INDUSTRIAL HOME, HARRISBURG, PA.

The care of eyes during infancy and childhood is a subject of very great importance, and one which in the majority of medical journals has not received the attention by ophthalmologists that it should have received. There is at present considerable written upon a great many ophthalmological topics, but generally most of them are written for journals devoted entirely to eye work, and it is very seldom that the general practitioner subscribes to journals which are intended for specialists, and the result is that he is, as a rule, not well posted upon the latest and best line of treatment in ordinary diseases of the eyes with which he comes in contact, in his general practice. For this reason I have taken the liberty of addressing a few words of advice to the general practitioner which if observed and carried out will, I hope, repay the time and labor spent in so doing. Blindness among children is becoming so prevalent that National legislation for its prevention is being urged as a necessity by a great many Medical Societies throughout the world.

Sanitary and antiseptic measures are as essential to the scientific treatment of diseases of the eyes, as antiseptics are to the successful practice of surgery. The physician who now neglects asepsis as well as antiseptics, in the treatment of diseases of the eyes, will undoubtedly be held accountable by the laity in general as well as by the profession at large, for all cases of blindness resulting from such wilful neglect of these precautionary measures. Ignorance on the part of the attending physician or nurse in the present age of advancement will not excuse them anymore. Infancy and childhood suggests a division into two periods. 1st, the period of infancy, 2d, the period of childhood. An infant is considered as such from the time it is born until it begins to walk, which is from one to two years. The first two weeks of an infant's life are the most important of its entire existence, and require the most careful attention upon the part of the physician and nurse; more so than at any other time of its life. I have reference to the lying-in period. It is a common occurrence for a mother to bring her child to my office, accompanied by a letter from her family physician, for a consultation as regards her child's eyes, which, she says, have been nearly or entirely blind since her confinement, when, she says, the child had very sore eyes from a cold it caught about that time, when the sole cause was that much dreaded disease, ophthalmia neonatorum.

The prophylactic measures which give the best results during the "lying-in time" and which should be followed out by the physician or nurse, are as follows: Immediately after the birth of the child carefully cleanse its eyes with absorbent cotton, carefully removing all secretions from them, then again with cotton saturated with 1–10,000 bichloride solution, or weak boracic acid lotion. After handing the child to the nurse, (which should be a trained one, or the physician should do it himself) to be washed, she should first wash its eyes (without the use of soap) with a pipette, by carefully separating the eyelids, and in like manner with either of the above antiseptic lotions. This is done for a double purpose; first, to prevent any catarrhal condition of the eyes which so often arises from a lack of these precautionary measures. Secondly, to prevent ophthalmia neonatorum, the disease which produces so much blindness among children, and yet when the proper precautionary measures are taken, the percentage of cases is small, and the results good, comparatively speaking. Should a case occur, however, of all the various methods of treatment which I have employed, that of Prof. Meyer, of Paris, has been the most efficient. This mode of treatment is as follows: I take a tiny stick (a burnt match end answers very well) with some absorbent cotton wrapped around the one end of it and saturated with a 1–3.000 bichloride of mercury solution combined with a weak boracic acid lotion, make a

thorough sweep in under both lids, being careful to extend well up in under the upper lid, and in like manner in under the lower one. This should be done for about three successive days, after which the profuse discharge generally ceases and it should then be treated as an ordinary case of conjunctivitis, with argentum nit, and boracic acid lotions. The majority of cases if treated in this manner will get well in from one to two weeks. The time and good results gained by this method of treatment is accomplished by the entire wiping away and destruction by antisepsis of all the micrococci (which is the accepted theory of ophthalmia neonatorum, it being the same as in gonorrhœa,) in about three applications, which is not accomplished so quickly by any other method to my knowledge. I wish to lay particular stress upon going well up in under the lid when making the applications with the cotton on the stick. Frequently some hæmorrhage will follow these applications, but not sufficient to interfere with the good results obtained, or to warrant a discontinuance of the same. I have never had a case more than two weeks until it was discharged well, and most of the time only eight to ten days.

After the "lying-in" period and the child comes under the sole charge of the mother, a few words as regards protecting its eyes from bright lights, etc., will not be amiss at this juncture. When it is taken out for a carriage drive, never have it face a bright sun or electric light for any length of time without having its eyes protected. Dr. David Little, of Manchester, Eng., cites a case of retinitis, and also one of blepharopasia, due to these causes. Snell, of Sheffield, speaks of a case of partial blindness resulting from the reflection of the sun upon the eyes by a reflector while passing along the street. Swanzy, of Dublin also mentions a case of central amblyopia in a gentleman due to a long carriage ride facing the sun, without any protection to his eyes. Never have a child lying in its cradle, or crib, facing a bright light when it can otherwise be avoided, and likewise protect them from draughts of cold air, dust, etc. When giving a child its bath, do not use any soap in washing its eyes. Use clean tepid water, rubbing gently over the eyeball so as not to produce any pressure, and thus prevent an accident which has occurred occasionally viz., dislocation of the lens. Work of that kind should only be entrusted to a good nurse when the mother cannot do it herself. Ptosis or dropping of the eyelids is sometimes noticed in children and is generally due to some irritation of the nervous centres, which by receiving proper treatment, restores the lids to their natural positions. A permanent paralytic condition requires operative measures to remedy the defect. Among the more frequent inflammatory diseases of the eyes of children is catarrhal conjunctivitis, and should be treated with the ordinary boracic lotions, thorough antisepsis, and soothing emolients to the edges of the lids to prevent them from adhering during the night, and prevent incrudations.

A habit which is still in vogue among mid-wives and some practitioners, is that of ordering the child's eyes to be washed frequently with the "mother's milk"; it is useless to say that such modes of treatment are now only practiced by charlatans, and should be discarded. Another frequent and very troublesome disease of children is phlyctænular keratitis and conjunctivitis, and is readily recognized by the small phlyctens occurring in multiple numbers, and mostly at the margin of the cornea in the conjunctiva, and sometimes on the cornea as well. Boracic lotions, and an ointment of atropine and yellow oxide of mercury applied to edge of lids, and a small quantity in the eyes will soon cure these cases. Its frequency of recurrence necessitates the treatment to be kept up for some time after the child seems apparently well.

The exanthematous fevers are all prone to cause the various ophthalmias, especially measles, also scarlet fever, variola, etc. The hygienic surroundings of all patients having any of these fevers should be of the best. Thorough cleanliness in every respect should be a daily command by the attending nurses. As soon as any form of ophthalmia appears, treat it at once. Antiseptic bathing of the eyes every few hours, cooling lotions, shielding them from bright lights, carefully removing all crusts from lids and applying soothing ointments is advised in all such cases. Any strumous condition of children should always have prompt medical attention, so as to prevent these various forms of ophthalmias which are so apt to prevail among that class. The over crowding of children in tenement houses in the various sections of cities, with a lack of sanitary precautionary measures are also prolific causes of these infectious diseases. One of the most horrible and contagious diseases due to the same cause is, trachoma, or granular conjunctivitis. Too much emphasis cannot be put upon the proper hygienic management of such patients, for by the intelligent

management of all such cases we can generally prevent a spreading of the disease when it first makes its appearance. When a case of trachoma occurs in a family of children the patient should at once be isolated from the rest. This is very often neglected, especially in Homes for Orphan Children, and the result is an epidemic of this intractable disease. It is also quite frequently found in public schools, and unfortunately they are allowed very often, to keep on attending school, intermingling among the rest of the scholars, using the same towels, etc., which of course should be strictly forbidden.

After isolation, treatment should be begun at once. All the aseptic and antiseptic treatments previously mentioned are applicable in these cases. The exclusive use of their own wash basins, towels, etc., should be strictly adhered to. Antiseptic soaps, such as "Stiefels," and others similar in composition, are excellent to wash their hands and eyelids with. Children should not be allowed to return to school until a responsible oculist certifies that they are entirely well. Never entrust the care of children to a "nurse girl" who has any form of ophthalmia, until you are certain it is no contagious disease. The medical treatment of trachoma or granular conjunctivitis is so varied in the different stages and forms of the disease, that to discuss an outline of treatment would be exhaustive and superfluous in a paper of this kind; but I will here remark, however, that they should always be under the care of a skilled oculist, or one thoroughly versed in the treatment of such cases. Much time and suffering can be saved when properly treated in the initial states. Spring catarrh, or what is more generally known as "Pink eye," is also a contagious disease and is under the same strict hygienic injunctions as all the rest of the contagious ophthalmias. If no precautionary measures are taken it soon becomes epidemic and is generally a very intractable disease to treat, unless taken in its very earliest stages. It generally yields nicely to the usual boracic and bichloride lotions; sometimes, however, it requires applications of 1 per cent. solutions of argentum nit. in addition to the above lotions. The next most important time of a child's life in regard to its eyes, are its school days. According to a very eminent authority on nervous diseases "no child should be sent to school before it is eight years of age," for various physical, as well as ophthalmological reasons. The ophthalmological reasons are, that a child's eyes are not fully developed yet, nor do the several coats of the eye have the same amount of elasticity to resist the severe strain put upon them in the constant convergence as they have at the age of 8 to 10 years. It is a mistake in parents who desire to have their children mentally developed at the age of 8 years, that they should have at the age of twelve. The further advanced a child is in its studies, the more its parents are pleased never thinking that this advancement is always incurred at the expense of a great deal of muscular strain upon the ciliary and recti-muscles which always has a deleterious effect upon the ocular coats when the eyes are excessively used, and especially so, at an early age. Myopia and all its consequences, as well as all the symptoms concomitant with eye strain, such as, headaches, dimness of vision for distant and near objects, blurring of type, epiphora, blepharospasm, blepharitis and conjunctivitis may all be brought on by too early, and excessive use of the eyes, and which can generally be prevented by the proper precautionary measures, in that direction. The majority of children are slightly hypermetropic when born, but very frequently become myopic after some years of close application to their studies. A studious child may by continuous, and excessive use of its eyes bring on myopia, notwithstanding that it is hyperopic to the extent of about one dioptre. This is brought about by the continued convergence required at near work, by which an undue amount of tension is produced upon the sides of the eye-balls, and thus causing their elongation in their anteroposterior diameters which is always the case in myopic eyes. Half day sessions of school of 3 hours each, is sufficient time for children to use their eyes at their studies until they are ten years of age. While at school or at home they should always be taught to hold their books as far off as possible, consistent with good vision. Alternating, periodic and constant strabismus is generally due to hypermetropia, which if corrected by proper lenses will effect a cure, and prevent a permanent strabismus, which generally is the result. If it remains uncorrected it will then require operative treatment. If a high degree of hypermetropia exists, and a squint of 20 to 30 degrees, you should correct all of the hypermetropia under full mydriasis, and after having it corrected for 3 or 4 years, and there still remains a strabismus of ten degrees or more, you may be obliged to perform a tenotomy or advancement of one of the recti-muscles. This should be done for

two reasons: First, to save the eye from becoming amblyopic, and second, for the aid it renders the other eye in bin-ocular vision, as well as cosmetic appearances. I have known a case of squint of 20 degrees convergence entirely cured by a continuous course of atropinigation of both eyes, and all refractive errors fully corrected. There are a very great many cases of strabismus of 15 to 20 degrees convergence operated upon for the mere sake of having it said that they operated on such a case, and in the majority of them the result is worse than if left alone. All such cases should first have a thorough trial of correcting lenses, when we know the defect is due to refractive errors.

As soon as a child complains of headaches, blurring of type, epiphora, dimness of vision for near as well as distant objects, and a congested condition of the eyes, it should immediately be stopped from all near work, and be examined by some responsible oculist and have such treatment as he may direct. Traumatic injuries to the eyes are of frequent occurrence, and none more dangerous than the ones produced by playing the game so much indulged in by children, and generally known as "Catty," or "Knip." It should be prohibited by law, as many an eye is destroyed by a "Catty" or "Knip." Hæmorrhages into any part of the eye, especially those occurring in the anterior chamber, vitreous, and retinæ, should have prompt attention. They are frequently produced by blows from sticks, a slap of the hand over the face and eyes, throwing of balls, falls, and sometimes by school teachers throwing rules, &c. at children in the school room. They usually absorb, and comparatively good results are obtained by leeches, purgatives and alterative treatment. Should a hæmorrhage occur in the muscular region, blindness generally is the result. Much more might be said upon this subject by taking it up more in detail, but to the general and busy practitioner a general review of the more important points are sufficient, and I trust may be of some value to all who may take the time to read them.

SWEDISH MOVEMENT CURE. *

BY DR. HENRIC SPARRE,

MILWAUKEE, WIS.

There cannot be anything of greater importance than the human system for the maintainance of good health, than normal blood circulation and rich blood.

To understand that it is impossible to control these, we must investigate the forces that accomplish it.

We will divide that which takes place in the human body into Cause and Effect. The nerve centers furnish the motive power, and their ability to continue with this depends upon their receiving nutriment from the blood in equal proportions of expenditure. The remaining portions are a combination of effects, brought about in an absolutely mechanical manner.

Some of these nerve forces are, as we know, controlled by our will, others are perpetual through life. Notwithstanding, both are subject to that mentioned above. None are able to continue furnishing necessary motive power without receiving their normal share of nutriment from the blood, and carrying off the used up parts through their proper channels. The venous blood absorbs and carries off the waste, and the arterial blood (through blood corpuscles) furnishes the material for new formation. This is done mechanically. You will readily perceive that if we control the circulation and undertake contractions and expansions of muscles, we also control nutrition and absorption. The heart is the organ that keeps the blood circulating, aided by the activity of the greatest part of the human body. Nature has wisely arranged that through the activity, the nutriment and absorption are materially increased. Absorption is a mechanical consequence of the speed of the venous circulation and in direct proportion to it. Diminished speed, diminished absorption, viz., congestion.

By mechanically forcing the blood in the main vessels, which, as tributaries, take up those where the congestion exists, and preventing its return, if the vessel is not provided with valves, will force its filling from below, and as a natural consequence, cause the blood in the congested tributaries to move faster.

Absorption normally restored and maintained, it can only be a matter of short duration until consequences of congestion are entirely removed.

There cannot be congestion in one place without causing checked arterial circulation. The restored circulation in the congested veins will admit the arterial blood. To illustrate, by swinging the feet actively circulation is increased, but the power required in performing it will soon cause exhaustion, which proves that an immense amount of nerve force is expended. If the person re-

* Read before the Milwaukee Medical Society, June 23, 1891.

clines and another scientifically twists the feet, better results will be obtained without any expenditure of nerve force. This is the principle of my profession in treating nervous and functional debility.

The importance of normal circulation for producing the blood is evident, and there is only one important feature of the process upon which the circulation has less influence, viz., assimilation. And there is not one that we can control as thoroughly by scientific manipulations, bringing the epithel in contact with the contents of the intestines, materially increasing the amount of chyle obtained. The functions of the spleen, whatever they are, and the usefulness of the pancreas and liver will unquestionably be aided by normal circulation of blood through them.

We have now come to another process of the utmost importance for the system, the discharging of refuse.

We can aid materially the action of the lungs, and in increasing that portion of the capillary circulation that brings the blood in connection with the pores, the exhalation is materially improved.

We can aid the kidneys by preventing congestion, or removing it if it has taken place, and in restoring circulation to the bowels. We can produce passage if the forces that induce the peristaltic motions are nearly or entirely exhausted, and with continued aid, the exhausted parts will have time to recuperate.

If there are local disorders in the circulation, they can be restored by applying former principles.

The diagnosis reveals the aid required to remove the cause of the disorder. The effect of movements and manipulations tells the experienced practitioner with what combination of movements, or manipulations that effect will be produced. As rarely anything can be done in aiding nature that has not more than one effect, some of which may be detrimental, counteracting manipulations must immediately follow to neutralize them, without interfering with the others.

The general impression of the medical profession seems to be that my treatment is good only for muscular development. We certainly can develop muscles, but does not this indicate that we can increase nutrition and absorption? In fact, we use the muscles to aid us in controlling the blood circulation in other parts. By undertaking the functions of the controlling muscle or muscles, we can reduce the effect of contraction and expansion to only one muscle or set of muscles and thereby regulate the circulation in the vessels within and through them, their branches and tributaries.

There are positive requirements to enable intelligent treatment of human ailments. Thorough knowledge of anatomy, physiology, the nature of the disorder and cause of the disturbance; and in my profession also the distinct effect of manipulations in every condition.

The English name "Swedish Movements" is misleading. There do not exist decided schemes of movements for treating diseases. Every case demands individual treatment. To illustrate, I mention the fact that in the Central Institution in Stockholm where the record is kept of movements used, the number from 1834 to 1885 exceeds 16,000, and few weeks elapse when cases do not come to me for treatment that call for movements I have not seen nor thought of before.

It is essential to closely watch the effect of treatment, to discover if desired effects result, as it verifies or disproves the diagnosis; and as different stages require change of treatment. I can refer to one case which required 42 schemes of treatment before the cure was effected.

Massage or "to rub" is simply four ways of rubbing, very efficient to aid in removing swellings of the joints, and increase capillary circulation on the surface, if scientifically performed.

A CASE OF COLOTOMY.

BY BENJ. W. WHITE, M. D.,
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In this short description of a case of colotomy, I shall not attempt to describe the various operations and their methods of performance, or detail the circumstances under which such a procedure might seem justifiable. But will only refer to a few points which may serve as a subject for your discussion of the merits of this operation.

CASE I.—The patient, a female, aged 53, married, but who had never borne children consulted me February 8, 1891, with reference to a growth in her abdomen. Her health had not been good for five years; having suffered more or less from constipation, dyspepsia and headaches, but had not noticed the abdominal growth until a few days prior to my seeing her. At the request of the patient, Dr. Lauder was called in consultation, and we established the diagnosis

of carcinoma involving the uterus, rectum, posterior wall of the bladder, vagina, and broad ligaments. The patient's condition rapidly grew worse until March 1, when marked stenosis of the rectum occurred, and the passage of fæces was only accomplished by partial dilation. At this stage colotomy was proposed and declined, and I was obliged to employ the best means I could to control persistent and severe vomiting. The use of the various drugs and hypodermic syringe did not achieve much in our favor. Meanwhile the rectal occlusion was becoming more complete, and on the 14th instant closed the passage, and nothing escaped from the bowels until the intestine was incised one week later (March 21st). At this time the patient's condition was not very favorable for operation; but with her consent and the valuable assistance of Drs. Young and Cowell I opened the intestine in the left inguinal region after the method of Littre. It was my intention to stitch the gut to the margin of the wound and leave it until the next day before opening it, but adhesions were so numerous and dense that while endeavoring to lift the loop of intestine up into the wound that portion which was grasped with the forceps was felt to give way and had to be closed with a clamp which was fastened and left in the wound until the next day, when it was removed and a good opening which allowed the passage of gas and fæces, was established. The patient rallied very well from her state of shock and lived twenty three days after the operation. During these twenty-three days her bowels moved daily, the nausea and vomiting lessened, the distress caused by flatus disappeared, and her temperature remained below a hundred degrees.

My reasons for operating in this case were:

1. To give the patient an opening through which to get rid of her intestinal contents.

2. To relieve vomiting and abdominal distension, and to make life more bearable while she did exist.

The cause of death in this case was exhaustion from lack of nutrition.

ACUTE DISEASES OF THE MIDDLE EAR.[1]

BY H. M. DUNLAP, M. D.

BATTLE CREEK, MICH.

Mr. Chairman and Gentlemen of the Section; I feel somewhat out of place in presenting this subject before you who are mostly older than myself both in experience and in years; however, the importance of the subject, together with the fact that it receives so little attention, not only from the general practitioner but from most specialists as well, justifies me, I think, in calling your attention to it on this occasion.

I am not here to present any new ideas or methods of treatment, nor yet to give my own experience in this branch of medicine. My only object is to stimulate a deeper interest in this branch of the healing art. There is no line of work in medicine which is so much neglected or little understood by the general practitioner as diseases of the ear, and I dare say there are comparatively few who have a thorough knowledge of even the anatomy of this organ.

There is no cause that needs apostles more than otology. We have gynæcologists by the score, we have surgeons and ophthalmologists, all of whom are working nobly for the benefit of suffering humanity. But where are the aurists? It is true that most of us print our cards with "Oculist and Aurist," but how many of us give half the time and attention to the ear that we do to the eyes?

It may be urged that the treatment of diseases of the eye give satisfactory and even brilliant results; that the cases of ear affection who come to us are chronic and yield very unsatisfactory results to treatment. All this, I admit to be true in a majority of cases, and it is this fact that urges upon us the duty of educating, not only the profession, but also the laymen in the importance of attending to the acute diseases of the ear and thus prevent a great many of the chronic ones to say nothing of the suffering that may be alleviated.

The acute diseases of the middle ear are not numerous and for our present consideration we may confine ourselves to the acute inflammations of the tympanum, together with the disturbances which usually accompany them. The different varieties of inflammation of the tympanum usually given by writers, such as simple catarrhal, purulent, suppurative, etc. are really only a difference in intensity and not in type, so that for convenience we may confine ourselves to the simple term "Acute Inflammation."

A question of interest to us here, is, are there serious results liable to develop from acute otitis media if left to run its course unmolested? I might, with equal propriety, ask if there is danger of serious results in a case of ophthalmia neonatorum if neglected? What would you think of a doctor who

[1] Read before the Michigan State Medical Society, June, 1891.

would say in such a case, "Well, suppuration is bound to come any way it and will get better after that," and not use the remedies which are known to be of great benefit in those cases, or who even failed to make use of one of nature's greatest remedies—warm water for cleansing purposes? We would even hold parents responsible in such a case for, at least, keeping the eyes cleansed, if they had no directions from a physician at all.

But how is it in the case of otitis media? The child, if old enough, complains of earache. This symptom alone in 90 per cent. of cases is an indication of inflammation and should receive attention. But the parent thinks it is only an earache and it will get well in a day or so, and even doctors are sometimes guilty of looking at it in the same light; perhaps some sweet oil and laudanum is dropped in the ear or a little tobacco smoke blown in and no investigation is made of the drum head, which in a great majority of cases would give positive evidence of the condition of the tympanum. Could we consider our duty done in the supposed case of ophthalmia, if we failed to expose the cornea and ascertain its condition? Just so, I hold, we are responsible if we fail to investigate the condition of the ear with equal care. It is just as easily done, and if it were ten times as difficult that would not excuse us from the duty.

In the former case, the danger is that of impairment or loss of function or possibly of the globe itself. In the latter case we have these same dangers and added to them, that of danger to life itself. It is unnecessary for me to consume your time with a description of the anatomical relations of the middle ear. It will suffice to mention some of the important structures in close proximity to this organ; viz., brain and meninges, internal carotid artery, vestibule and cochler, seventh nerve and mastoid cells. A consideration of these parts led Prof. Politzer to remark that, "The tympanum is bounded on the outside by the drum head and on the inside by death." What are the results that may follow acute inflammation of the tympanic cavity? It is true that many cases go on to an apparent spontaneous recovery without suppuration or rupture of the membrana tympani. It is also true that many of them do suppurate and perforate and may then recover without much impairment of function, but, on the other hand, many of them terminate in chronic suppuration with constant danger of acute attacks, which may involve important surrounding structures, to say nothing of the constant annoyance the patient has to bear. But let us go back to those milder cases, which we say have terminated in resolution, and see what becomes of some of them. The attack may be very mild, terminating in a few days. Perhaps the little patient has a naso-pharyngeal catarrh, and two or three times a year has an acute attack of rhintis or pharyngitis, which are also neglected as in the chronic trouble, and with each exacerbation of the throat disease there is also a congestion or mild inflammation in the ear, which also in time becomes chronic with obstruction of the Eustachian tubes and we have developed that disease we so frequently see viz., *Dry catarrh of the middle ear.*

One may say how could this have been prevented? I answer by asking how do we prevent trachoma following an acute ophthalmia? Is it not by judicious treatment of the acute affection? Just so in the case of the ear; in the acute stage we can use warm or hot water douches, and general antiphlogistic treatment and in severe leeching of tragus, and sedatives, and as the acute symptoms disappear, use inflation by Politzer's method, or any other good one, and at the same time apply appropriate treatment to the throat and nose.

It is not, however, my design to give details of treatment as this can be readily obtained from books if we are sufficiently interested to look up the subject. How can we bring about an improvement in this branch of our profession? As I intimated in the beginning, it can only be done by education. *First*, we must educate ourselves to look upon the organ of hearing as one worthy of our careful consideration and attention. It is true there may not be opportunities for brilliant results such as are afforded in some other branches. But our aim is not always to achieve great things; but to do well the small duties if we can thereby benefit suffering humanity.

How far and in what way must we proceed in our endeavors in this direction? It is evident that upon the specialist rests the first burden of the work. I believe it is our duty, upon every opportunity to impress upon our brother general practitioners the necessity of giving more attention to this work. They are the ones that come in contact with the families in their homes. They have charge of the little patients during the acute diseases with which inflammation of the middle ear is so likely to occur. They are able to teach parents the necessity and importance of giving attention to the sup-

posed dangerous earache, etc. The greatest stupidity is manifested among some of the lower classes in our large cities. One expression frequently used is, "there is no danger so long as the ear does not bleed."

In a report from eleven institutes, where especial attention is given to ear treatment in the cities of this country and of Europe, only one out of seven of the cases admitted was an acute malady. This shows how little attention is given to this matter by the people themselves. Probably the experience of every practitioner indicates the same heedlessness.

In conclusion let me urge upon each one the importance of doing what he can to bring the laity and profession as well to look upon this subject in its proper light. We have educated the people to take some care of their eyes and are very careful to correct errors of refraction, etc. This shows what can be done in other lines if we will only do our full duty, and labor to advance the science of medicine and its usefulness.

SPECIAL CORRESPONDENCE.

A LETTER FROM BERLIN.

As Berlin has in recent years, developed as a medical centre of considerable importance; and has become conspicuously noteworthy, because of the discoveries of Koch, with the announcement within a few months, that he had found a remedy which exercised a curative action on tuberculosis, a few words in things medical, may not be without interest to the brethren in America.

Berlin is one of the cities, *par excellence*, in which the antiseptic theory was unconditionally accepted. But, alas! for human progress; Listerism, or even orthodox antiseptics, is thoroughly dead as far as Berlin is concerned. And, with the solitary exception of Koch, himself; who has three wards, in which he yet is continuing his investigations, at the Moabit Hospital, nobody here pretends to cure any species of tuberculosis with the lymph!

It appears, that even Von Burguran who was one of the most ardent advocates of the Koch treatment, has now, wholly discarded it, and, from the free manner in which I saw the mercurial oleates employed in these lupus patients, it would seem a question; which was effecting the cure; the mercury or the lymph.

In this connection, I might say, that while in Ireland I saw six cases of lupus, in the service of Dr. James Brown, in the South County Hospital, City of Dundalk. In all cases, the temperature chart showed well marked re-action at the time of inoculation. In all, there were too, well marked local changes in the ulcers. In many, the sores cicatrized over. Yet, in every instance, within two months after apparent cure, the ulcers broke out afresh.

Considering the rather questionable manner in which this mysterious medicament was withheld from the profession, and its elaboration and precise nature kept secret, until it was practically proven a failure, few will have the regrets which they might otherwise experience at the premature demise, of what promised to be, one of the greatest boons ever conferred on suffering humanity.

When one enters an operating room here, and sees the porcelained brick walls, polished and marbleized floors, glass tables, and numerous sterilizing ovens, he naturally asks himself; what has become of antiseptics?

Antiseptics are now seldom employed here, except in fœtid wounds, or where purulent changes are progressing; never in the cavity of the peritoneum.

The word now is vigorous asepsis. But there is danger, even with this, that it may be brought into disrepute, by young, inexperienced, and over enthusiastic operators, in carrying it to an absurd extent.

It, however, is an immense gain, to be able to dispense, at least, in part, to get rid of the slopping and splashing, inseparably connected with antiseptic douching and flushing, not only to the inconvenience of the operator, but to the peril of the patient; who has his body often chilled, in the performance of the tedious time-consuming operation, to which layer after layer of wet towels are spread over his bare integuments. The Berlin Hospitals, large and small, are all constructed on the pavilion plan. This arrangement is most conspicuously carried out at the Moabit Hospital, which covers more than ten acres of ground, consisting of thirty-two pavilions; each containing from thirty to forty patients. They are long, rather wide, with low, tarred paper roofs, and hard, smooth, stony floors. There are no cellars under them. They are well lighted and ventilated, and stand about forty feet apart. The group takes the shape of a horse shoe, with a large shaded yard for an area.

One can conceive many reasons why those isolated structures are not desirable, as serving the purpose of a general hospital, independent of economical grounds. For it is well known, that low-roofed buildings are very warm in summer, and very cold in winter; and are extremely difficult to heat and ventilate.

The ideal hospital is at Frederick's-Hain, a suburb of Berlin, in which the widowed Empress of the late Emperor, is actively interested. The operating theatre is a marvel of beauty. This hospital is U-shaped too. It consists of seven separate buildings, which, with their extensive grounds, are all walled in. A large proportion of the patients are very young children. Here, as in the large Bethanian hospital, they have dispensed with intubation of the larynx altogether, and have gone back to tracheotomy.

I saw three little patients in the diphtheria-pavilion with tubes in their trachæ. Steam is applied to their throats direct from the main supply, being conducted to the little patients in long narrow rubber tubes. This hospital is ventilated by indirect radiation. The air entering from above and passing out again close to the floor. I saw a hospital similarly constructed in Tewksbury, Massachusetts, not long since. This is the only possible effective system of ventilation, in large apartments warmed in winter by transmitted heat. The hospital arrangements here are excellent. The surgeons informed me that they have an abundance of everything in the way of supplies for dressings. The sick are nursed by orderlies and nurses. The latter serve from six months to a year, in learning, and then have to give in return three years after they have completed their novitiate.

The Bethelem hospital, controlled and owned by a Protestant order of nuns, is a fine institution. It occupies an extensive area, within the mural confines of which are nine separate buildings. By Dr. Holl, the chief of the surgical division, I was given a long opportunity to examine patients and make inquiries. I was quite surprised at the number of ununited fractured femora here after treatment. It occurs, I am informed, quite as often in the young and vigorous as with the old and decrepit. It is a favorite custom with them to apply starch-bandages on any sort of flesh wound to the extremities. They claim that it gives firmness and comfort to the parts, until the healing processes are complete. As a rule, they never apply the gypsum bandage until, at least one week has elapsed after the fracture. I was convinced that this is a move in the right direction. They first subdue all congestive and inflammatory action before the plaster-bandage is adjusted.

I saw three of Mikulitz's resection of the astragalus here. One had been in the hospital three years. There was bony anchylosis in none of them, and I was confirmed in my impression of the general uselessness of the operation in scrofulous disease of the ankle-joint, by these cases.

National prejudices die hard. Notwithstanding the generally admitted opinion that ether anæsthesia is the safest, yet they still use chloroform in Berlin, and, very seldom anything else.

No doubt Berlin must continue a great medical centre for some time for Germans and German speaking Americans. But for those in America, unfamiliar with the language, they may stop at the British Isles, at London, Dublin or Edinburgh, cities which have provided members of the medical profession whose names will go into immortality.

THOMAS H. MANLEY, M. D.

Berlin, August 10th, 1891.

SELECTED FORMULÆ.

ACUTE ARTICULAR RHEUMATISM.

Hatfield speaks well of the following liniment as a local sedative to the affected joints:

℞ Ol. gaultheriæ.....f℥ ss.
Spirit. chloroform.....f℥ ss.
Lin. saponis.....f℥ iij.
M. Sig. Apply freely and wrap the joint in cotton batting.—*Dis. of Chil.*

Internally the following may be given:

℞ Sodii bicarb.....℥ ij.
Sodii salicylat.....℥ ij.
Aquæ menth. pip.....f℥ iij.
M. Sig. f℥ij. every three or four hours.

The above formulæ seldom causes any nausea, as the salicylate is apt to do when given in syrup. The soda should be omitted when the urine becomes alkaline.—*Powell, Ess. Dis. Children.*

IRRITATING EYE-WASHES.

Franke (*Deutsche Med. Zeit.*) calls attention to the fact, that the installation of solutions of atropin, eserin and cocaine into the eye frequently gives rise to acute conjunctivitis. The reason of this is that these solutions are not antiseptic and generally contain mould or fungi. If these remedies are added in the desired proportion to a 1:10,000 solution of bichloride of mercury, they

will be kept antiseptic for an indefinite period, and not give rise to any irritative symptoms.

INHALATION IN WHOOPING-COUGH.

℞ Thymolis..... gr. xx.
Acid carbolicis.
Ol. sassafragis.
Ol. eucalyptus.
Picis liquidæ.
Ol. terebinthinæ, aa.....f℥ ij.
Ætheris.....f℥ iv.
Alcoholis, q. s. ad.....f℥ iij.
M. Sig. Put about 30 drops upon a pad of such size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

In severe cases the inhalation treatment is supplemented by the internal administration of

℞ Acid carbolicis.....gr. iij.
Sodii bromid.....gr. lx.
Tinct. belladonnæ.....gtt. xx.
Glycerinæ.....f℥ iij.
Aquæ, q. s.....f℥ ij.
M. Sig. f℥ij occasionally for a child 3 or 4 years of age.

—*Jour. Amer. Med. Assn., from Dr. Beall Daniel's Med. Jour.*

ASTHMA.

The following prescription is claimed by Dr. Brubaker to have a greatly beneficial effect in asthma:

℞ Liquor potassii arsenitis.....gtt. ij.
Potassi iodidii.....gtt. x.
Syrup. tolu
Aquæ, aa.....f℥ ss.
M. Sig. This dose t. d.

LUPUS ERYTHEMATOSUS.

℞ Zinci sulphatis.....℥ ss.
Potassi sulphureti.....℥ ss.
Aquæ rosæ.....f℥ iij ss.
Alcoholis.....f℥ iij.
M. Sig. Mop on morning and evening for ten or more minutes at a time.

—*Courier of Med.*

ACUTE GASTRO-ENTERITIS.

℞ Creolin.....gtt. iij.
Cinnamon water.....gtt. lxxv.
Syrup marshmallow.....gtt. xxij.
M. Sig. Teaspoonful every hour for very young children.

—*Schwinz.*

Morris recommends the following:

℞ Bismuth subnit.....℥ jss.
Salol.....gr. xvj.
Menthol.....gr v.
Aq. destil, q. s. ad.....f℥ ij.
M. Sig. f℥j three or four times a day for child one or two years old. An occasional dose of Dover's powder added to the above when the bowels are too loose.

—*Daniel's Med. Jour., June,* 1891.

CREOLIN IN ERYSIPELAS AND ECZEMA.

Dr. Rothe has used in the treatment of erysipelas a creolin ointment containing—

℞ Creolin.....1½ parts.
Creta præp., axung. porc., aa...15 "
Ol. menth. pip.....gtt v.

This is spread in the thickness of the blade of a knife over the diseased parts two or three times a day, a thin layer of cotton-wool being applied as a covering. In from twelve to twenty-four hours improvement was always apparent, and the disease was cured in three or four days. The same ointment also did good service in a case of weeping eczema of the face, as also in several cases of eczema in children. A patient suffering from scabies was treated with a thorough washing with soft soap and inunction of this ointment, with such a decided effect that Dr. Rothe considers creolin to be undoubtedly a specific for the disease.—*Brit. and Colo. Drug.*

POWDER FOR ATROPHIC RHINITIS.

Hall recommends the following in the treatment of atrophic rhinitis:

℞ Bicarbonate of sodium, Borate of sodium } of each..... gr. v.
White sugar..... gr. xij.

This is dissolved in two ounces of hot water and snuffed into the nostril thoroughly. After this has been employed to loosen any secretion which may remain, intra-nasal instillations of weak solutions of alum, in the strength of 1 per cent., or in other cases sulphate of zinc, nitrate of silver, or powdered iodoform, or aristol, or salol, or boracic acid, are useful. After these applications it is well to apply to the mucous membrane of the nasal cavity a spray of eucalyptus as follows:

℞ Vaselin.....℥ij.
Essence of eucalyptus.....f℥j.

In other cases it is only necessary to spray the nostrils with liquid vaseline.—*News.*

SYPHILITIC ULCERS.

In *La Semaine Médicale,* the following prescriptions are given for the treatment of syphilitic ulcers:

℞ Salicylate of mercury, Carbonate of potassium } of each...gr. xv.
Distilled water.....f℥ vj.

Apply to the part by means of compresses, or if an ointment is preferred, the following may be used:

℞ Salicylate of mercury.....gr. xv.
Vaseline.....℥ j.
Mix and use externally.

OINTMENT FOR COMEDONES.

The *Canadian Pharmaceutical Jour.* quotes the following prescription, said to be used by Unna in the treatment of comedones:

℞ Solution of hydrogen peroxide.....f℥ij.
Vaselin.....℥ij.
Lanolin.....℥j.
Acetic acid.....f℥j.
Mix and perfume.

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WORTH ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE OBSTETRIC FORCEPS AND IDIOCY.

The relation between forceps delivery and idiocy, cerebral palsies, and various brain lesions, is one which has attracted much attention among obstetricians and neurologists. That these conditions do follow instrumental labor is well established, hence it is of interest to examine the subject, in order to draw practical lessons concerning the use of the forceps. Aside from gross lesions produced by pressure or crushing, the damage to the brain is usually brought about by intracranial hæmorrhage, or thrombosis. A great many idiots are the first-born of a family, and the majority are boys. According to Jacobi asphyxia plays an important role in the etiology. I. Langdon Brown showed that forty per cent. of the idiots who were first-born children had a history of asphyxia.

In the *American Journal of Obstetrics*, June 1891, Jacobi, in a very instructive article, points out the anatomical conditions present in a *neonatus* which favor the occurrence of hæmorrhage. The blood has less fibrin, less salt, less hæmaglobulin, less soluble albumen, less specific gravity, and more white corpuscles than the blood of advanced age. Although the proportion of the heart to the rest of the body is largest about the time of birth, the arterial pressure is low, which condition favors venous stasis, hæmorrhage, or thrombosis. The elastic membrane of the arteries of medium and small calibre is thin and simple, especially where actual branches are given off. This arrangement also favors hæmorrhage.

These facts so succinctly stated by Jacobi show the wisdom of the teachings of modern obstetrics concerning the conduct of labor. Prolonged labor is very dangerous for the fœtus. Asphyxia and death, or worse, asphyxia and idiocy, are real dangers. The danger increases with the pressure to which the head is subjected; as when there is a large head in a normal pelvis, or a normal head in a small pelvis. The broad rule that

the second stage of labor should be completed within two hours to insure the safety of mother and child, is not an absolute one, but is a safe guide, only to be disregarded under proper circumstances. When the second stage is tedious, or the head becomes arrested in the pelvis, the forceps should be applied; primarily to save the fœtus from asphyxia, and secondarily to save the mother from fistulæ.

On the other hand the wise obstetrician will ever bear in mind that the forceps is an instrument capable of harm, and that the harm is due largely to the carelessness or lack of skill of him that uses it. Injury or death may result to the fœtus from a faulty application of the forceps, and especially from violent efforts at traction. When the head is high up the advantages of Tarnier's axis-traction forceps should cause its employment. Less force need be used—because well-directed—and less injury will be done. It is to be hoped that stories of obstetricians "pulling with all their might," "bracing their feet against the bed," etc., will cease to be heard. Such methods are unnecessary, can only do harm, and hence are reprehensible.

Agitation of this subject can result only in good; for while it will deter some of small experience from using the forceps, it will prove a healthy correction to those who have been violently abusing them. A careful use of the forceps *secundém artem*, will seldom injure either mother or fœtus. While forceps extraction accomplished by violence, or a failure to resort to the forceps under proper indications will result in many deaths or "spoiled babies" through cerebral traumatism or asphyxia.

CORRESPONDENCE.

COMMENTS ON DR. J. MADISON TAYLOR'S LETTER.

To the Editor Medical and Surgical Reporter:—It is rather surprising that Dr. J. Madison Taylor in closing his admirable letter in your journal of the 29th inst. should say, in speaking of the warped ideas of the too radical or too conservative physician—"That these matters right themselves if left alone is no more true than that the body rights its functions unassisted." Judging from his comments, in the early part of his letter, on the ancient but rational treatment of maimonides, and his own reputation as a physician he certainly could not have meant what he said in allowing nature to play such an unimportant role in the cure of diseased conditions of the body. All human beings demand some object to worship, to adore; from the savage Hottentot who bows down to his pile of stones, to your civilized enlightened man who reverently recites the Apostle's Creed. This spirit of worshipping the unknown, the uncomprehended is closely allied to the blind confidence human nature reposes in any vaunted remedy for the relief of human ills; and it matters not whether it is composed of charms, incantations, Christian Science or drugs. We can overlook these superstitions in the laity who know little or nothing of the human organism. But why any physician, educated and observing as they all ought to be, can have the self confidence, the audacity to claim that his medicines will cure without nature's potent assistance should be deprived of his title. Of every hundred cases that the doctor "*cures*" ninety-nine would have recovered without seeing a drug with the claims of a quicker convalescence.

It requires no elaborate theorizing to prove this. The fact that homœopathy does not claim a higher mortality, not so high in fact, in some diseases, as when "*medicine*" is given; and the hue and cry that follows the birth of every new drug, each with its coterie of followers as fickle as a Roman populace. "Now this *drug* was (?) incomparable; and the ensuing night made it a fool and beggar," which goes to prove that nature is the great leader even though handicapped by every drug in "The Heavens above or the earth beneath."

Nature may ask our assistance but rarely does she demand our meddling interference with her laws.

J. Newton Hunsberger.

BRASS MOULDERS' DISEASE.

Editor of the Medical and Surgical Reporter:—I should like to submit a short sketch of Brass Moulders' Disease which has come under my notice, and I earnestly request that all who have had any experience on the subject will answer the few brief questions at the end of this article.

H. B——, aged 42, farmer. Until the fall of 1875 perfectly robust and healthy. In the fall of '75 he began brass casting and for the first six months was troubled very much with colic, constipation, chills and fever and became much debilitated.

He suffered much from loss of appetite and indigestion. Chills and fever at intervals until '86, a period of ten years.

Patient continued the work for ten years or up to the above period, 1886. In March 1886, symptoms of numbness set in, beginning in right hand, which grew cold, extending to elbow. Later left arm became affected in same manner.

In July '86, patient quit work. Complained of complete loss of appetite and a peculiar sensation like a tremor running the length of spinal column, also had severe neuralgic pains in the head. For three months lived an out-door life on a farm. Result: much improved in health, symptoms had nearly disappeared.

Resumed work in October. Symptoms almost immediately began to return, accompanied with severe neuralgic pains beginning in the lower limbs, sharp shooting pains passing from heel to calf of leg and knee, sometimes continuing up the limbs by way of spine to head, pains shooting up from back part of head over crown. Constant insomnia. After severe attacks would leave left shoulder and arm numb, which would disappear under rest. Lower limbs affected in the same manner, though left side and right leg affected the most.

All symptoms aggravated by heavy lifting or prolonged exertion, becoming alleviated during rest.

Quit work again January '87, totally unfit for labor. Did but little work in shop for nearly two years. Symptoms again gradually disappeared as general health was improved, though they were never removed entirely. This period of two years, patient spent in travelling all over the continent and Europe, also part of the time working on the farm. In walking, patient constantly complained of a sensation of pulling or drawing from limbs to back which seemed to fetter the gait, and was aggravated by over exertion.

Resumed work October '89, continuing to December 1st, '90, a period of thirteen months, when he quit work with a return of all the symptoms with the addition that his right leg was swollen to the body.

Treatment.—Complete rest. Much of the time in bed, with light exercise.

Resumed work May '91, with improved health but not fully recovered. Since which time to the present, three months, patient has continued at work and is doing so at the present time.

Present condition normal, very little numbness of hands and arms, right hand and elbow being most affected, sleeps well, appetite not quite as good as when he went to work in December.

In conclusion I wish to hear from some of your legion of readers brief answers to the following questions:

1st. What is the prognosis as to the ultimate result if the patient continues his occupation?

2d. The usual life history. Cause of death, etc., if death occurs?

3d. Should the patient continue his occupation or ought he to be encouraged to give it up?

4th. Are there any medicines that will cure or prevent the disease?

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PERISCOPE.

THERAPEUTICS.

HOT INFUSION OF DIGITALIS IN THE TREATMENT OF PNEUMONIA.

Dr. E. P. Hershey, writes in the *Medical News* that during the past three months, excellent opportunity has been afforded him to test the value of the treatment of pneumonia by means of large and frequently-repeated doses of the infusion of digitalis, given early in the attack. The marked benefits resulting in a few cases thus treated last fall suggested its great importance and bolder use. In twenty cases, the treatment was commenced by the administration of ten grains of the mild chloride of mercury, together with a tablespoonful of the infusion of digitalis, given every hour, as hot as the patient could drink it. In from six to ten hours, profuse perspiration occurred in every case, followed in twelve cases by a normal temperature. In three instances, the temperature, without the use of any antipyretic, dropped to 100°, in four, to between 101° and 101.5°, and in one, to between 103° and 105.5°. In no case was the temperature below 103° when first seen, and in all but one, it was ushered in by a distinct rigor. In all the cases the characteristic rusty sputum was

present, but its short duration showed clearly that the inflammatory process had been cut short.

The severest case was that of G. J., a laborer, aged thirty-two, in whom there was violent delirium from the outset. The patient having felt ill for nearly twenty-four hours, had a violent chill at 4.30 P. M., February 25th. At 6 P. M. the thermometer showed a temperature of 105.5°; the pulse was 130. His attendants had him strapped to the bed. Crepitant rales were heard at the base and over the middle lobe of the right lung, anteriorily and posteriorily. The patient was given ten grains of calomel, followed in one hour and a half by a tablespoonful of a hot infusion of digitalis, the latter being repeated every hour, despite the fact that the temperature at 11 P. M. had fallen to 103°, at 5 A. M. to 101°, and the pulse to 115, with a general improvement of all the manifestations of delirium. At 6 A. M. there was profuse expectoration of rusty-colored sputum, that continued for twenty-four hours. On the third day the temperature returned to 105°; after active purging, it fell rapidly. On the morning of the fourth day the pulse had dropped to 50, the temperature to 96°. The infusion of digitalis was discontinued, and a combination of camphor, strychnine, and quinine given. Convalescence was rapid, and just ten days after the beginning of the attack the patient was up and about. The loss of weight in this short attack was remarkable. At the beginning of the attack the man weighed about 168 pounds; on March 7th he weighed 144½—a loss of 23½ pounds.

That the hot infusion of digitalis acts quickly upon the cardiac muscle that forces the blood through the affected area and thus to a marked degree overcomes the dyscrasia, is probably the *rationale* of the action of the drug. The use of a large dose of calomel, by reducing the consistency of the blood, takes the place of the old-time method of bleeding.

Petresco used the remedy still more heroically, making an infusion of ten grains of the powdered leaves instead of seven, to the ounce, and giving a tablespoonful every half hour instead of every hour. There can be no doubt that the results obtained in the cases reported were due to the solution being given hot; Dr. Hershey found that, in the use of drugs intended to act quickly upon the circulation, their diffusion is more rapid if given hot. This method of administration was suggested by Dr. D. D. Stewart, of Philadelphia, who first reported that the administration of sulphonal in hot water gave better and more rapid results than when the drug was given dry or in cold solution. In the twenty cases treated no ill results followed these large doses of digitalis. However, it would be advisable to watch the circulation; in case of a sudden lowering of the pulse-rate, the infusion should at once be stopped, for this is an indication that the desired effect of the remedy has been obtained; should slow pulse and low temperature persist, nothing will stimulate better than camphor, quinine, and strychnine, in quantities suitable to the case. Alcohol was not used until the temperature had subsided. In none of the cases was the so-called standard remedy, carbonate of ammonia, used. Further investigation will be made with this method of treatment, and when a sufficient number of cases have been treated an additional report will be made. At present this method of treatment has yielded Dr. Hershey far better results than any other.

NERVOUS APHONIA OF FOUR WEEKS' DURATION CURED BY SUGGESTION DURING HYPNOTIC SLEEP.

Emile Müller (*Gaz. méd. de Strasburg—Gaz. hebdom. des Sciences Médicales*, April 4th, 1891) relates the following case: Miss R., thirty years of age, was sent to him by her physician to be treated for aphonia, from which she had been suffering for four weeks without interruption. She had had three previous attacks, none of which had lasted for more than a week. Expectorants, inhalations, the continuous current, all had been employed without effect.

Laryngoscopic examination was negative. Dr. Müller tried faradization without result. He then concluded to employ hypnotism. He succeeded in hypnotising her without difficulty, promising her that he could probably restore her voice, if she allowed herself to go to sleep.

While she was in deep sleep, he suggested to her that her voice had returned. He then asked her her name, and she replied in a clear, strong voice. She also answered other questions put to her. Dr. Müller finally raised her from the hypnotic sleep, and she, wishing to apologize for having gone to sleep, perceived that she was speaking in her natural voice. She remained under observation for about a fortnight, and had no further aphonia during that time.—*Jour. Nerv. Ment. Dis.*

IODOFORM IN THE TREATMENT OF BURNS.

Rottenberg (*Therap. Monatshefta*, March, 1891) advocates the following method of treating burns. He is surgeon to large iron-works, and sees many cases of all degrees of severity. The blisters, if present, are pricked, and a silk thread soaked in corrosive sublimate solution run through them, and allowed to remain. The whole surface, no matter what the degree of burning, is coated thoroughly with a thick layer of vaseline containing 10 per cent. iodoform, and then covered with gutta-percha. The ointment is renewed daily. The pain is always very speedily lessened, and healing takes place in an eminently satisfactory manner, and quickly.

THE TREATMENT OF CHRONIC ECZEMA BY CREOLIN.

Dr. R. Glasgow Patteson, in the Dublin *Med. Jour.*, calls attention to the fact that the value of tarry preparations in many forms of skin disease—especially psoriasis and eczema—has long been recognized. "If I were required to name one remedy only for eczema," writes Mr. Jonathan Hutchinson, "I would chose tar; if allowed to chose two, tar and lead; and if three, tar, lead and mercury;" adding his "belief that tar is the specific for all forms of true eczematons inflammations of the skin." The form in which he uses it, is the alkaline solution of coal-tar known as "Liquor Carbonis Detergens"—a teaspoonful to a pint of warm water. The cost of this preparation debars its use in out-patient practice, and it was the cheapness of creolin and its excellent antiseptic properties that induced me a year ago to try its effects in the treatment of chronic eczema. A short experience satisfied Dr. Patteson that the most useful strength was that of one drachm of creolin to eight ounces of water—roughly speaking—a teaspoonful to half a pint of water. In this proportion, from which Dr. Patteson has never varied, it forms a bland and soothing emulsion, milky in appearance, and with a strong tarry odor, which has a marked effect in allaying irritability and itching, prevents the formation of scabs and crusts, and appears in a striking manner to moderate the pus producing activity of certain forms of eczema. The mode of applying it which Dr. Patteson has found most efficacious is the following, which though applicable in the majority of instances, must yet, like every other remedy, be modified to meet individual cases.

The parts affected, having been freed from crusts or other accumulations, by appropriate means, should be freely bathed in the freshly-prepared emulsion for from ten to fifteen minutes. If the disease is in the acute stage, or if there is much secretion, lint soaked in the liquid may be applied over all parts, and retained in place by suitable dressings. But if the eczema is of the squamous type, treatment in the intervals is best carried out by means of ointments—that which has yielded in his hands the best results being one composed of zinc oxide, white precipitate, and the glycerine of the subacetate of lead. Under this treatment recent cases recover with astonishing rapidity, and even cases of long standing soon show signs of improvement which, in the majority of instances, goes on to complete and permanent recovery. In only a few instances has it failed to do more than alleviate the condition.

He has since tried the remedy in cases of scaly eczema and psoriasis with marked relief to the irritability and itching, but it is still too soon to form any judgment as to its curative powers. But in the infective pustular eczema it is an agent that effectually controls the process, and well deserves a trial on a larger scale. If we accept Unna's definition of eczema as "chronic parasitic catarrh of the skin, with desquamation, itching, and the disposition to respond to irritation by exudation and well-marked inflammation," then we have a rational basis on which to ground our treatment by such an active germicide as creolin.

MAGNESIA AS AN INTENSIFIER AND PRESERVATIVE OF PEROXIDE OF HYDROGEN.

It was ascertained some time ago that when calcined magnesia is added to peroxide of hydrogen the bleaching action of the latter upon cotton is greatly intensified.

Prud'homme has recently studied this behavior, and has found that there is produced a peroxide of magnésium which is much more stable than the peroxide of hydrogen, even at a boiling temperature.

If a 6 volume peroxide of hydrogen is diluted with 10 parts of water, and then boiled for half an hour, its strength is reduced in the proportion of 100 to 10.

But if, under the same conditions, there are added 5 Gm. of calcined magnesia for every 100 parts of peroxide present, the half-hour's boiling will reduce the strength in H_2O only by one-tenth (from 100 to 90).

The formation of the peroxide of magne-

sium is rendered evident by proceeding as follows:

Place calcined magnesia [5 parts] in contact with a 3-volume peroxide of hydrogen [100 parts] at the ordinary temperature, and allow them to re-act for some time [the original says "from several hours to several days"]. Then filter, wash the contents of the filter, and dry at 100° to 105° C.

On assaying the product with permanganate of potassium, it will be found to have the composition $3Mg(OH_2).MgO(OH_2)$. This compound loses its active oxygen at a temperature of about 300° C.

The bleaching effect of a mixture of magnesia and peroxide of magnesium is due to both agents acting together. When fatty substances, such as oils, are bleached by these agents at a boiling temperature, there is an abundant escape of carbonic acid gas, due to the oxidation of glycerin.

Peroxide of hydrogen alone, when very slightly acidified, is capable of attacking neutral fats, producing therefrom fatty acids under evolution of carbonic acid gas.—After *Compt. Rend.*, 112, 1374.

[*Note by Ed. Am. Drugg.*—The facts above given may be utilized in surgical practice, in which peroxide of hydrogen is at present playing an important part as an antiseptic and disinfectant. The addition of magnesia will, in many cases, not be objectionable; and when it is desired to have the peroxide act rather slowly and gradually, no better method can be employed.]

SULPHONAL IN THE NIGHT SWEATS OF PHTHISIS.

Dr. Erede, of Genoa, calls attention (*Riforma Medica*, May 22nd, 1891), to what he calls "the marked antidiaphoretic action of sulphonal." He says that if given in the early hours of the evening it almost invariably succeeds in suppressing or greatly diminishing the night sweats of phthisis. A dose of half a gramme, given in the form of pastille or suspended in some gummy vehicle, generally suffices. The largest amount given was 1 gramme; this failed of its effect only in a very few cases in which the disease was extremely advanced. As no untoward effects were ever noticed, even in very debilitated patients, Erede thinks that with proper precautions the drug might be pushed up to 2 grammes, the usual hypnotic dose. In many cases he observed that in discontinuing the sulphonal after a time the sweating did not begin again at once, but only after some days, when it was immediately checked by repeating the medicine. This shows that the organism does not readily adapt itself to the prolonged use of the drug, as it does, for instance, to certain narcotics. Erede is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system.—*Brit. Med. Jour.*

FORMIC ACID IN SURGICAL TUBERCULOSIS.

In a paper read before the German Surgical Congress, Dr. Senger stated that his attention had been drawn to the fact that, in the treatment of surgical affections with iodoform-glycerine emulsions, the effects produced differed greatly, according to quality of glycerine employed. It was found that impure glycerine contained always a certain amount of formic acid, the proportion varying according to its degree of impurity. This led him to infer that the marked irritating properties of the formic acid might have some share in the curative effects of iodoform emulsions in tuberculous processes. The fact that iodoform, when introduced into the body, is converted by the process of oxidation into formic acid and hydriodic acid, explains its varying effects in different cases. When oxidation is sufficiently active to decompose it, iodoform exerts a curative action, which is not manifested when the process of oxidation is feeble. For these reasons the author added formic acid to iodoform emulsions and obtained favorable results, where the latter proved ineffective. In cases of tuberculous affections of the glands, and in a case of tuberculous arthritis of the ankle joint, formic acid was used alone, the formate of soda in solutions being injected. The results were excellent.—*Deut. Medicin. Wochenschr.*, No. 17, 1891.

BULL NETTLE—A NEW ALTERATIVE.

Dr. W. W. Pugh, M. D., states in the *Southern Practitioner* that he has been experimenting for some time, more than two years, with the root of a plant that grows in Texas, known by botanists as *jatrophia stimulosus*, and commonly called "bull nettle." He has found it to be specially adapted to the treatment of syphilis.

It is a stimulant of unusual power, and a most excellent alterative. He has treated quite a number of syphilitic patients, suffering from the worst forms of the disease, and has relieved them in three or four weeks, the

symptoms not having re-appeared in those treated over two years ago.

He makes a tincture of the root, and gives from twenty to thirty drops, three times a day.

MEDICINE.

RESUSCITATION BY OXYGEN.

Lieut. Col. Henry Elsdale's experience with oxygen as a resuscitating agent, related in the May number of the *Nineteenth Century*, is evidently considered by him (and by the editor of the magazine), as something wholly new. While far from being a novel application of oxygen, the case appears to be unique in the extraordinary pressure employed. A man who had been attempting to empty the coal-gas from a balloon was found lying insensible, "having been breathing an atmosphere of coal-gas for an unknown time." "No action of the heart could be felt," there was "no perceptible breathing," and to all appearances the man was dead. Pure oxygen being at hand, under a pressure of 1000 pounds to the square inch, a tube connected with the reservoir was inserted into the man's mouth, and the gas turned on "as delicately as possible." Immediately the body began to exhibit writhings and convulsions, and in about ten minutes the man arose, well.

That wonderful physician who, a century ago, honored the chair of chemistry at Oxford, Thomas Beddoes, the worthy friend and co-laborer of Joseph Priestley, Erasmus Darwin, James Watt and Humphrey Davy, demonstrated, among other things too little remembered by the profession, that kittens and rabbits that had inhaled oxygen for a certain time were more resistant to drowning, freezing or suffocating with irrespirable gases, than similar animals not saturated with oxygen.

Since the time of Beddoes, numerous observations proving the usefulness of oxygen in resuscitating the drowned or those poisoned with narcotic drugs or asphyxiating gases have accumulated. In J. Solis-Cohen's treatise *On Inhalation*, we read that previously to 1847 it had been proposed by Jackson and Richardson that "wherever ether was administered oxygen should be kept in readiness to be inhaled in case of the occurrence of formidable symptoms, and that Mr. Hooper, acting on the suggestion, has supplied his inhaler with the means of furnishing oxygen at pleasure." Ducroy "proposed to make every patient awakening from chloroform-narcosis inhale oxygen, in order to rid him of headache and other inconveniences following the administration of that anæsthetic," and a very remarkable instance of recovery from chloroform-narcosis by the use of oxygen, which occurred at the New York Medical College, was published by Abrahams in 1853.

Notwithstanding all this, and despite the fact that modern commercial enterprise has made it perfectly feasible always and everywhere to have the agent at command, there are many Hospitals in which oxygen is not ready for instant use in emergencies, and it has not yet been recognized as an indispensable part of the outfit of life-saving stations. We believe that, not only in every clinic or private house where ether or chloroform is to be given should oxygen under pressure, be instantly available, but that in hotels where persons are liable to be poisoned with coal-gas, and even in police-stations where persons poisoned by opium are likely to be taken, it should always be possible te find a reservoir of the gas. At seaside resorts, too, it should be part of the rescuing paraphernalia kept at the beach. A single life saved, and there would be many, would more than compensate for the cost. The pressure appears to have been a factor in Elsdale's case, and in any case the administration of oxygen should be accompanied with slow and regular movements of artificial respiration. B. W. Richardson has shown that in artificial respiration the emptying of the lungs is ordinarily as important as the filling of them; and in his simple device of a double hand-bellows for that purpose, artificial expiration by suction plays an equal part with artificial inspiration by pressure.—*Med. News.*

A CASE OF FOUR ATTACKS OF APPENDICITIS IN ONE YEAR—EXCISION OF THE APPENDIX—ABSENCE OF ANY FURTHER SYMPTOMS A YEAR AFTERWARDS.

Dr. A. Ernest Maylard, says the *Lancet*, in view of the recent discussions which have taken place regarding the treatment of this particular class of diseases, the record of the present case may not be without interest. The patient, Mr. G. G——, a strong and healthy young fellow of twenty-one, was under the care of my friend, Dr. Alex Napier, of Crosshill, to whom it had suggested itself that the case was one particularly well suited for the operation of excision of the appendix. He asked me to see the patient with him,

and I concurred both in the diagnosis and in the treatment proposed. The clinical notes of the case, as furnished by Dr. Napier, are briefly as follows:—June 4th, 1889: First attack slight, lasted only a few days, and subdued by rest and a few doses of an opiate. Constipation, pain and tenderness in right iliac fossa, some distension; temperature not much elevated. July 14th: Second attack, after lawn tennis, very severe; temperature ran up to and over 103° F.; pulse rapid; vomiting for several days; constipation; coated tongue; marked distension, universal tenderness, and tympanitic percussion note. Most acute pain in right iliac fossa. Patient very seriously ill for a few days, but gradually recovered, as before, by rest, opiates, poultices, and limited diet. Oct. 7th: Third attack, after some indiscretion in the way of exercise. Again a severe attack, much like the last; overcome in the same way. April 2d, 1890: Fourth attack, less severe than the last two, but marked by exactly the same general symptoms. In all four attacks, as the symptoms passed off, the pulse fell markedly—to 44 on one occasion. On April 8th I saw the patient with Dr. Napier, he was then recovering from his attack. We had him removed to the Training Home for Nurses, where, with the assistance of Dr. Rutherfurd, I excised the appendix on the 16th. Operation: An incision was made in the nipple line, over the cæcum and ascending colon. The presenting bowel was traced downwards until the junction with the ileum was reached. The finger, then inserted beneath the cæcum, felt the appendix distended and fixed. It formed a tense elastic tumor about the size of a little finger. For about half an inch at its cæcal extremity it was normal in calibre, but from that point onwards the appendix was dilated. Around this narrow normal part of the appendix a double ligature was passed, and the neck divided between. In the first attempt to detach the appendix from its connexion it burst, and some mucus-like material escaped. The adhesions were in some places intimate, but at others recent and very vascular. After complete severance the oozing was so free that pressure had to be applied for some short time. The wound was dressed once after the operation, and healed by primary union. The patient's temperature was normal throughout his recovery, and no untoward symptoms of any kind showed themselves. He was kept rigidly on his back for a month to allow of firm union in the parietal wound. State of the appendix: On slitting up the viscus it was found to be empty, and on everting it the lining of its walls had the appearance of pulpy granulation tissue. No canal could be made out at its cæcal extremity.

It is now a year since the operation. The patient has enjoyed perfect health, and is quite free from any feeling of weakness in the region of the cicatrix. The diagnosis of catarrhal appendicitis proved correct, and so, also, would seem the treatment. Whether this patient would, by conservative measures, have reached a period when no further repetition of his troubles would have taken place, or whether the time might have come for opening an abscess in the region of the appendix, or even graver measures, it is impossible to say. The operation can hardly be said to have carried any risks with it, and its result was and has been to relieve him completely of his trouble.

PYOGENIC COCCI IN THE SWEAT IN PYÆMIA.

Dr. Anton Freiherr von Eiselsberg, Assistant in Professor Billroth's clinic in Vienna, reports (*Berl. klin. Wochenschrift*, June 8th, 1891) the dicovery of pyogenic cocci in the sweat of a man aged 31, the subject of pyæmia, following osteomyelitis of the femur. The patient was somewhat relieved by operative procedures, and these were followed by excessive sweating, but he ultimately died with multiple pyæmic abscesses. Both in the pus from the original seat of disease and in that from the metastatic abscesses and also in the patient's blood, a large quantity of staphylococcus pyogenes aureus was discovered. In order to examine the sweat, the patient's forehead was very carefully cleansed and disinfected, and specimens of sweat were taken from various parts of the skin so cleansed directly they appeared. Inoculations into cultivation tubes were made, and it was found that in agar and gelatine no result took place, but in two agar tubes a growth ensued, which on further inoculation was proved to consist of staphylococcus aureus. Cultivation on plates and frequent repetition of the experiments were followed by similar results. The presence of the identical micro-organism in the pus and in the blood and in the sweat, after the most elaborate precautions had been taken to prevent contamination of the skin, would seem to warrant the conclusion that the coccus is actually present in the sweat and is excreted from the body with it. The improvement so commonly noted after excessive sweating may perhaps be directly

dependent upon this excretion, and at any rate should direct attention to the treatment of the skin in such cases, so as to favor as far as possible the excretion of sweat when the disease is presumably due to the presence and activity of the staphylococcus aureus.—*Brit. Med. Jour.*

PAINFUL SENSATIONS IN HEART-DISEASE.

While the subjective manifestations, dyspnœic troubles of all sorts, from which those afflicted with heart-disease suffer, have received full consideration by physicians at all times, the subjective sensations of pain which accompany valvular disease have received but slight notice.

Of 483 cases of heart-disease treated during the last seven years in Nothnagel's clinic, 127 (i. e., 26.2 per cent.) manifested painful sensations. Nothnagel excluded from this list all cases of paroxysmally recurring attacks of stenocardia; moreover, under painful sensations were included only those pricking, tearing, burning and boring pains in the cardiac region, which were more or less constant. At times the patients described a sensation as though the heart were being torn out; or there suddenly came on an excruciating pain, during the continuance of which the heart pulsated with great force. In either case, the pain was located in the left side or in the back. At times there occurred a feeling as if a foreign body lay in the left thoracic cavity, as if there were a sore in that region, or as if the heart trembled with pain. Nothnagel makes a further observation, however, which has not before been recorded, namely, that in these cases the objective sensibility is increased, and that not only in cases of paroxysmal stenocardia, but also in other painful conditions. Gently pinching a fold of the skin, lightly pricking with a pin, or pressure over an intercostal space in the line of an intercostal nerve, in the precordial region, elicits great tenderness, sometimes even severe pain.

In uncomplicated disease of the heart-muscle (myocarditis, fatty degeneration, arterio-sclerosis, and idiopathic hypertrophy), the subjective sensations are so pronounced sometimes as to almost establish the diagnosis. The clinical picture in these cases is similar to that of valvular disease.

The author does not give us a clear and uncontrovertible explanation of these painful phenomena, but leaves us to consider the algesia-cutaneous hyper and neuralgia eccentric irradiating manifestations.—*Zeitschrift für klinische Medizin*, Bd. 19, Heft 3.

SURGERY.

THE TREATMENT OF CHRONIC ULCERS BY MASSAGE.

Dr. A. Ernest Maylard, in the Glasgow *Med. Jour.*, publishes a short contribution to advocate a methed of treatment for a very common and always a very troublesome class of cases—that of chronic ulcers of the legs. The subject is based on a few cases which have been successfully treated in the wards of the Victoria Infirmary, the histories of which are related. The principles on which the treatment is founded, and its mode of application, are thus briefly described:

As a rule, these chronic ulcers arise from some slight accident to an area of the limb already in a condition to break down at the smallest incentive. The parts are in a condition of passive stagnation and engorgement, the result either, as most frequent, of varicose veins, or of some other obstructive influence. The result of this passive engorgement is a hyperplasia of the connective-tissue element, leading to much thickening of the parts around. This is shown by the denseness or hardness of the soft tissues, and not infrequently by some enlargement of the bone due to sub-periosteal deposits. Still further, the blood stagnation renders the new formed tissue, as also that of the old, of very low vital powers. An ulcer, then, once formed is only too likely to extend. Another important factor is the mechanical obstruction which this venous engorgement and tough new formed tissue causes in preventing the entrance of fresh arterial blood *to* the part, and the exit of used up material by the lymph channels *from* the part.

What, then, is needed in the treatment of these cases is 1. the relief of the engorged condition of the veins by the removal of the cause which engorges them; 2. the relief of the plugged condition of the lymph vessels; 3. the re-admission of arterial blood to the part; and 4. the removal of deleterious exciting influences from the surface of the ulcer itself.

The recumbent position, which is usually enforced on the patient, or, failing that, the application of an elastic bandage when the patient is erect, usually aids much in removing the cause of venous engorgement of the part. But helpful as are these passive measures they far from supply all the needs required. More active treatment is requisite to effect an entrance of arterial blood to the part, and an exit of effete material from it. This can only be done by "massaging" the

limb—to wit, by rubbing, pinching, and kneading the part. The forcibly stroking the limb in an upward direction tends to drive on the venous blood, and let in the arterial; to force out the contents of the lymphatics, and to allow the entrance of other effete products.

In order to massage the floor of the ulcer, he has adopted the following plan: A piece of jaconet, sufficient in size to be held tightly around the limb, is dipped in some 1 in 2,000 bichloride of mercury solution, and then placed with its non-glazed side over the ulcer and surrounding parts. The smooth surface is dried, and a small quantity of vaseline smeared upon it. The palmar surface of the hand is by this means permitted to pass easily over the ulcer, and thus admit of its being massaged like the surrounding parts.

While the immediate result of this treatment has in every way proved good, he believes its more remote effects will be found to be equally valuable, for the cicatrix of an ulcer that has been massaged is seen to be well vascularized, and therefore much less likely to break down than when the ulcer has sluggishly skinned over. Further, it is a treatment which can and should be continued by the patient, so as to maintain the parts in a healthy condition.

Where these ulcers are associated with varicose veins, such veins ought to be exercised; and thus a potent factor in the cause of the passive engorgement of the part removed.

The only other operative procedure (with the exception of skin grafting) which is sometimes of service is to dissect up a flap from the immediate neighborhood of the ulcer, twist it round over and on to the freshened surface and edges of the sore. As with skin grafting, this should be done when the ulcer is healing. For by this time the massaging of the part has revivified the floor of the ulcer, and rendered healthier and more active the skin around.

With regard to the fourth requirement, the removal of all deleterious exciting influences from the surface of the ulcer, this simply means the cleansing of the ulcer from all septic matter.

The following are his conclusions:

1. Improvement shows itself at once, and is most marked during the first week or two. The heaped up skin edges begin to disappear, and a sloping healing blue line is observed. The floor of the ulcer soon shows healthy granulations. The surrounding skin becomes early whitened or mottled, indicating the complete emptying of the congested venules.

2. Later, the skin around becomes more pliable, and can be pinched up and freely moved on the underlying tissues.

3. The cicatrix formed is well organized, and thus less liable to break down.

4. The treatment can be carried out by a nurse or by the patient's friends, and the massaging should be continued after healing has taken place, in order to maintain the skin and soft parts in a healthy condition.

OPERATIVE TREATMENT OF HYPERTROPHIED PROSTATE.

Bottini, of Pawia, related at the Berlin meeting of the International Medical Congress (*Wiener Medicinische Wochenschrift*, May 23rd, 1891) his methods and results in the treatment of 57 cases of hypertrophy of the prostate gland, by Galvano-cautery. His apparatus consists first, of a Galvano-cautery of about the calibre and curve of a Mercier's catheter, which contains four tubes; two for the transmission of electrical currents, and two for a stream of cold water with which to cool the apparatus, and; second, of a thermo-Galvanic knife for simply incising the gland. The first apparatus, which is for simple destruction of tissue, is suited for cases of partial or slight enlargement; the second for cases in which the hypertrophy is complete and uniform, or when, if partial, it is very great. The cautery knife resembles a Mercier's inciser with the difference that its edge is formed of a dull platinum rim, and also that it has two tubes for cold water.

There are three stages in the operation: 1st. Introduction, which is in accordance with rules for introduction of catheter: 2nd. Cutting or destruction of tissue, with heat *not greater than a red glow*, which is manifested by the hissing sound of burning tissue. 3rd. Removal of apparatus, also in accordance with rules for removal of catheter.

Of the 57 cases treated, 32 were completely cured, 11 improved, 13 without improvement, while 2 died. The fatal results were obtained with the old apparatus, before the introduction of the cold water tubes.—*Amer. Lancet.*

CEREBRAL SURGERY.

Dr. Frank P. Norbury, in the *Medical News*, in summing up what can be done in cerebral surgery quotes the conclusions of a report read before the International Medical Congress, 1890, by Victor Horsley, of Lon-

don, one of the foremost surgeons and experimenters in this line of work:

1. Operation should be done in every case of brain injury. It is the only means of restoring the patient to a normal condition and may prevent epilepsy and dementia.

2. In every case of intra-cerebral hæmorrhage, seen within four hours of the apoplectic attack, the common carotid artery should be tied.

3. Trephining should be done in cases of headache refractory to all other measures.

4. Cerebral gummata should be removed; iodide of potassium palliates but does not cure them.

5. Tubercles should be removed when practicable.

6. Operation should be performed when other tumors are present, even when multiple, if relief is not obtained from other measures in six weeks.

7. Operation should be performed for athetosis and other spasmodic affections.

8. Operation should be performed for Jacksonian epilepsy, after first testing the cortex with the faradic current to locate the point of origin of the convulsion.

9. Operation should be performed for fracture of the vertebral column when compression exists.

10. Operation should be done for paraplegia from spinal caries.

Horsley represents aggressive cerebral surgery. Perhaps he is an extremist, or possibly we have not yet awakened to the possibilities of operative surgery in diseases of the brain and spinal cord.

THE SURGERY OF THE CAUDA EQUINA.

Dr. Leopold Laquer, in the *Neurologisches Centralblatt*, describes a case of compression of the cauda equina that came under his notice in September, 1888. The patient at that time complained much of a pain in the sacrum, and was unable either to sit or to lie with any comfort. In December, 1889, there was an exaggeration of the previous symptoms, with marked alteration in motion and sensation, as well as some atrophy of the lower extremities. The electrical re-actions of both muscles and nerves were normal, and the reflexes were normal. Despite all treatment, the symptoms of pain and stiffness of the lower part of the back continued to increase in severity until September, 1890, when the patient was able to move only in the most careful way, and was obliged to hold his back in an attitude of extreme kyphosis. On the right side the patellar reflex was abolished, and on the left side it was very weak. Sensation was absent in the scrotum and perinæum, and also in the lower extremities. The sexual power was weak. There was some atrophy of the quadriceps of each side, but there were no trophic changes, and there was no ataxia. The patient's condition was one that obviously called for interference of some sort, as death from exhaustion was imminent. The symptoms, taken collectively, led the author to the diagnosis of compression of the cauda equina, from some unknown cause, followed by generative neuritis. Dr. Louis Rehen cut down upon the sacrum, and, laying open the entire canal, disclosed a small extradural tumor in the middle of its lumen. After its removal, further examination of the growth showed it to be a lymphangeioma cavernosum. Recovery was prompt. By the end of the second week after the operation the patient was free from pain, and sleep was natural. Four months later there was only a small opening left in the sacrum, the patient was able to go about holding the body in a normal attitude, the functions were nearly restored to the normal state, and the reflexes, though still diminished, were equal on both sides.—*N. Y. Med. Jour.*

STATISTICS OF STOMACH AND BOWEL RESECTIONS.

At the International Medical Congress last year at Berlin, Billroth reported the results of stomach and bowel resection. He gave the statistics of 124 resections which had been made in his clinic from 1880 to 1890; of which 83 were by himself, 3 by Wolfler, 8 by Hacker, and 15 by Saltzer and Eiselberg. The cases were all chronic processes with pyloric stenosis, malignant forms of swelling. There were 41 cases of pyloric resection (7 male and 34 females, with ages of from 26 to 58 years). The operations lasted from 1½ to 3½ hours, with removal of 4 to 21 centimetres of the intestine. The cause of operation was: In 28 cases carcinoma; in one case sarcoma; in 12 cases callous cicatrices. Results; 19 cases recovered, 22 died. Of 27 typical pyloric resections, 12 were favorable and 15 fatal. Of the 13 cases of carcinoma that had endured the ordeal of the operation, 5 died after 10 months, and one after 5½ years from recurrence. There were yet living three women of whom two had been operated upon 2½ and 4½ months.

There were six operations on account of scar stenosis, of whom three recovered. One patient died after three months from peritonitis, caused by an abscess in the cicatrix.

There were 28 gastro-enterostomies on account of carcioma with 14 recoveries. These all died in from one to eight months.

Of 11 resections of the small intestines (7 male and 4 females) all were favorable. (Eight times on account of preternatural anus, once traumatic opening of intestine, and once carcinoma).

Of 24 resections of the cœcum, there were eleven on account of carcinoma (with five recoveries); thirteen on account of fistula after perityphlitis (seven recoveries, five deaths, and one persistent fistula). Of total cases of cœcum resections, eleven deaths, thirteen recoveries.

Of 8 colon resections, four deaths and four recoveries.

Of 7 resections of rectum all recovered, five times with formation of fistula.—*Wiener Med. Wochenschrift.*

GYNÆCOLOGY.

THIOL IN DISEASES OF WOMEN.

Gottschalk (*Centralblatt f. Gynakologie*, March 21st, 1891) has used thiol in inflammations of the uterus and its appendages for nine months. He treats para and perimetric exudates with vaginal tampons impregnated with a ten or twenty per cent. glycerine solution of the drug. At the same time he has the abdomen rubbed once daily with a salve containing the same remedy. After the tampon has been placed, the patient, as a rule, feels a "drawing up" of the belly, and there is a free flow of vaginal secretion. The tampon is removed in twenty-four hours, and the flow ceases. The local effect of the drug on the skin of the abdominal wall is much the same as that of tincture of iodine. After six or eight days' application, it is well to intermit this part of the treatment until the skin has regained its normal condition. Under this treatment, which will eventually be supplemented by the internal use of the drug, large pelvic exudates have disappeared in a few weeks. Up to the present time, Gottschalk has not failed to cure any case of this kind by this treatment, which has passed through his hands. Baths and massage are very useful adjuncts to the treatment. Inflammatory erosions about the vagina are treated with equal success by dusting them with a dry thiol powder. Acute and chronic endometritis also yield readily to the remedy applied in solution on an applicator. The application is painless and without danger. The uterine colic which follows the use of iodine is not met with. No serious irritation has been observed to follow either the vaginal or intra-uterine applications. At times a slight blood discharge is seen to follow immediately after the treatment, due to the local irritating action of the drug upon the uterine mucous membrane. The mucous membrane is exfoliated after many applications.—*University Medical Magazine.*

MOLAR PREGNANCY AND ALBUMINURIA.

Dr. Schuhl (*Archiv. de Tocol. et de Gynéc.*, June 1891) discusses the question as to whether albuminuria in pregnancy is sometimes the cause of myxomatous degeneration of the chorionic villi. After a search through many statistical records, he believes that it may be laid down as a fact that albuminuria in molar pregnancy is usually precocious, as is very clearly indicated in 7 out of 132 cases of this form of abnormal gestation. In 1 of the 7 cases of albuminuria, the albumen appeared during the first month, in 1 during the third, in 3 during the fourth, in 1 during the fifth, and in 1 where the uterine fundus reached to about the level of the umbilicus. On the other hand, many authorities have shown that in otherwise normal gestation albuminuria most frequently occurs during the last three months; being very rare during the earlier periods. Dumas, Dr. Schuhl observes, quotes cases where albuminuria has appeared at the sixth week, and the third, fourth and fifth month, but maintains that these are quite exceptional. The rule, according to Dumas, is that in primiparæ albuminuria commences between the seventh and eighth months, whilst in multiparæ it does not begin until the ninth. From the above evidence, Dr. Schuhl concludes that there is some obscure relation of cause and effect between albuminuria and hydatid degeneration of the chorion.—*Brit. Med. Jour.*

HÆMATOSALPINX AND TUBAL GESTATION.

Dr. J. Veit (*Centralbl. f. Gynäk.*, May 30th, 1891) discusses the now very important question as to the distinction between ruptured early extra-uterine gestation and hæmatosalpinx from other causes. Under the latter category come cases of hæmorrhage into a tube already distended,

and cases where the distension follows the bleeding. Dr. Veit relates a case of hæmorrhage into a tube following torsion of a hydrosalpinx. New growths and even injuries may cause hæmorrhage into the tube, but such cases are very rare. The "tubal mole" is a difficult subject. The presence or absence of chorionic villi amongst the coagula in these cases is not the only distinction between ruptured tubal gestation and hæmatosalpinx. The abdominal end of the tube is always open in cases of early tubal pregnancy, excepting where migration of the ovum from the opposite ovary through the opposite tube and across the uterus has occurred. A distinctly closed ostium, sealed up by the usual inflammatory processes, in a tube full of blood or clot otherwise indicates hæmatosalpinx not due to abnormal pregnancy. This closure of the tube is also present in the hæmatosalpinx of atresia of the lower genital tract.—*Brit. Med. Jour.*

TORSION OF PEDICLE OF AN UNDIAGNOSED OVARIAN CYST IN THIRD MONTH OF PREGNANCY.

Dr. Baudron (*Bull. de la Soc. Anat. de Paris*, April-March, 1891, pt. 10) describes a case where a patient, aged 28, was seized with violent pains in the left iliac fossa in the third month of her third pregnancy. She had previously noted occasional pain in the same part. The whole abdomen was now swollen and tender. For a week the violent pains continued, becoming more severe at regular intervals, so that abortion was suspected. There was no rigors, no nausea, no vomiting. Diagnosis was very uncertain, parametritis, retro-uterine hæmatocele, and hydramnios being suggested by different observers. The uterus was of the size normally observed at the end of the seventh month, though the menstrual history indicated that pregnancy had not advanced beyond the third. On the tenth day the patient vomited, the abdomen felt very tender, and intermittent pains had been continuing for a week. M. Pozzi operated on the next day; digital exploration had proved that there was no evidence of threatened abortion. A dark liver-like body, fluctuating and adherent to the intestine, uterus, and and great omentum, lay above the uterus, which was, as expected, gravid, and at the third month of pregnancy. The body was punctured, and six quarts of dark fluid, fœtid blood escaped. The body was the left ovary, cystic, and with a large pedicle twisted three times from right to left This pedicle had been detected by palpation a few days previously, and taken for ectopic pregnancy in a rudimentary uterine cornu. The pedicle was ligatured and the tumor removed, the peritoneum flushed, and the wound closed, excepting at the inferior angle, where a strip of iodoform gauze was passed into Douglas's pouch. Abortion took place next day, and a dead macerated fœtus was expelled, without flooding. Three hours later, as the patient was asking for some drink, she was seized with a fatal attack of syncope.—*Brit. Med. Jour.*

OBSTETRICS.

THE CAUSES AND TREATMENT OF PUERPERAL OSTEOMALACIA.

Dr. H. Fehling, in the *Archiv. für Gynäkologie* says that the results in cases of puerperal osteomalacia have heretofore been exceedingly poor. According to Litzmann's and Hennig's statistics, eighty per cent. of the cases died. Cesarean section (Porro's method) gave better results than any other plan of treatment. According to Baumann, out of forty-four cases of osteomalacia who were delivered by this method, twenty-six recovered. Of these twenty-six, five died from other causes, such as heart disease, nephritis, and tuberculosis, leaving twenty-one cases who made excellent recoveries. These results led Fehling to believe that the removal of impregnation and nursing effected a cure, and, arguing from this, he decided to observe what effect would result in these cases by removing the ovaries. He operated upon fourteen cases in all, one of which died; the others made an excellent recovery. From the large number of cases occurring in this district we would consider the disease as epidemic in Basel. In examining the histories of those cases that were operated upon, we find that their ages varied between 28 and 51; that they had each borne from 4 to 10 children, the average being 5.4. The social condition does not seem to have any effect upon the acquiring of the disease, nor does long nursing.

According to these results, there can be no doubt that by performing oöphorectomy, and thus putting an end to ovulation and menstruation, a cure for osteomalacia can be accomplished. Other observers have obtained similar results, so that the total number of cases has now reached twenty.

As to the causation of the disease we are still very much in the dark. Some believed the disease to be due to a bacterium, and its epidemic character would make this seem plausible. But if such were the case, how could we explain the method of cure by means of removing the ovaries or by Porro's operation? Diminished alkalinity of the blood has also been given as a cause. Experiments were made upon the patients to test this. The results would not lead one to believe that this could be the cause. The diminished alkalinity merely shows the severity of the disease.

Certain positive factors in the disease are: First, that nearly all the cases were markedly worse when menstruating. This would lead us to suppose that the menstrual congestion stood in a certain relation to the disease. This is also confirmed by the fact that the disease occurs more frequently during pregnancy and in the puerperal state. Second, the marked diminution of the pains shortly after the operation. Two or three days after the operation the pains in the sternum and ribs cease, then later on those in the pelvis and lower limbs also disappear.

The result of these observations leads us to believe that the disease is due to a morbidly increased activity of the ovaries. The changes in the bones are to be looked upon as reflex. According to this, we must look upon osteomalacia as a trophoneurosis of the bones, especially of the pelvic bones, this trophoneurosis depending upon the generative process, especially in the ovaries.—*Amer. Jour. Obstet.*

THE DIAGNOSIS OF NON-PUERPERAL OVARIAN ABSCESSES.

Acute non-puerperal inflammations of the ovaries are extremely rare. Pathologico-anatomically considered, there are two forms of inflammation of the ovaries—the parenchymatous and the interstitial. The first form occurs in acute exanthemata, typhoid fever, recurrent fever, cholera, septic processes, phosphorous and arsenical poisoning, and has merely an anatomical interest; for, clinically it produces no characteristic symptoms, and is only discovered at the post-mortem table. The second form occurs very rarely; except after the puerperal state and in the beginning of the disease, the diagnosis is extremely difficult, for the symptoms could be considered as due to a perioöphoritis or a localized peritonitis. According to Olshausen, a positive diagnosis of acute oöphoritis can only be made when we can feel the enlarged ovary, and can be sure that the pain arises from it and that none of the surrounding organs are affected. Even then we cannot be sure, but, in order to be so, have to perform a laparotomy, or we make our diagnosis at the autopsy. The total number of cases that have been published being very few, the following case is cited in order to show the difficulties in making a diagnosis:

A woman, blonde, single, 23 years old, gave the following history: Menstruated regularly from her sixteenth year on. In June, 1888, had an abortion in the tenth week; does not know the cause. After that she had a discharge which lasted six weeks. Following this menstruation began again and continued to be regular. From September to November, 1889, she had a severe attack of acute articular rheumatism. Had a leucorrhœal discharge during this entire attack. In the beginning of February, 1890, she was suddenly taken with chills and fever; began to menstruate and had slight drawing pains in the left side of her abdomen. A physician who saw the patient diagnosed peritonitis. The pains became more severe and finally became cramp-like in character, extending from the left side toward the right and into the back. Complained of slight burning when urinating. Last menstruation March 22d, lasting four days. Six days later a severe hæmorrhage, lasting three days. Complains continually of pressure upon the bladder, and is compelled to urinate very frequently. Has very little appetite. Temperature below normal, rising in the evening to 38.7 C. Abdomen tense and retracted. Pressure upon the abdomen is not painful. By external palpation nothing can be made out. Uterus not enlarged; sharp anteflexion; freely movable. The right ovary, the size of an almond, can be easily felt. On the left side a tumor is felt, as large as an apple, and is attached to the fundus uteri, but can be separated from it. The consistence of the tumor is firm, but in several places soft spots can be felt. The tumor cannot be moved. The left ovary cannot be felt. A diagnosis of purulent tumor of the uterine adnexa was made. Whether it was of the tube or ovary remained a doubtful question. As the tumor had weakened the patient, and made her unfit for her work, and caused considerable pain, it was decided to perform laparotomy. This was done on April 14th. The abdominal incision began at the umbilicus and extended

to three centimetres above the symphysis. Intestines came into view and were pushed to one side. Then on the left side the tumor became visible. It was surrounded by the peritoneum, and was adherent to a loop of small intestine. It was loosened with considerable difficulty. In endeavoring to draw it out of the pelvis it burst, and the contents, which were greenish-white pus, about three tablespoonfuls in all, were evacuated into the abdominal cavity. It was carefully wiped away with sponges. That portion which was adherent to the intestine could not be separated without tearing the latter; it was therefore left behind and the rest removed. The tube was ligated at the uterine end, and was also removed. Abdomen was carefully cleansed and the wound closed. No reaction occurred until the tenth day, when a small superficial abscess of abdominal walls was developed. This lasted eight days. On the 10th of May the patient was discharged cured. Microscopically, portions of ovarian stroma were found in the abscess membrane. From the history the probability is that the abscess was due to a gonorrhœal infection. It would have been impossible in this case to tell whether it was a pyosalpinx or an ovarian abscess. It could also have been mistaken for a hydrosalpinx, hæmatosalpinx, tubo-ovarian cyst, and tuberculosis of the tubes. A hydrosalpinx has rather a characteristic form. Beginning at the uterine end, it swells as it goes out toward the side. The affection is usually bilateral. The amount of pain is very slight and there are very few symptoms. It is utterly impossible to diagnose a tubo-ovarian cyst if it undergoes suppuration from the disease in question. The same is true in cases of tuberculosis, when cheesy masses form. It may also be difficult to diagnose the disease from a parametritis or an intra-peritoneal pelvic exudation. The cause of the interstitial form of the disease is usually menstrual suppression or else gonorrhœal infection. The former cause is a rare one. The symptoms in the case just described pointed to gonorrhœa as the cause. The yellowish discharge, the burning and frequent desire to urinate, all point to this as the source.—Dr. Joseph Rheinstein, in *Archiv. für Gynäkologie.*—*Amer. Jour. Obstet.*

PÆDIATRICS.

LAPAROTOMY FOR THE TREATMENT OF TUBERCULAR PERITONITIS IN CHILDEN.

Surgical treatment of tubercular affections of the peritonæum presents, besides its practical importance, a great scientific interest on account of its mysterious and unaccountable action. There are three principal forms of tubercular peritonitis, classed as follows: 1. tubercular masses, without ascites, disseminated in the peritoneal cavity; 2. cystic effusion; 3. disseminated tubercles with general ascites. The course of the disease is acute, subacute or chronic. Excepting the form combined with ascites, which is often mistaken for a simple ascites, and which yields to tonic treatment and repeated punctures, the different forms of peritoneal tuberculosis present a grave prognosis, and Henoch even considers them incurable. The first cases of surgical treatment of the disease were due to errors of diagnosis. The results were so favorable that the cases have greatly multiplied. At the recent Congress at Berlin, König presented statistics of 131 cases of surgical intervention in tubercular peritonitis. The mortality was 3 per cent.; 84 cures, 23 improved. The operation consists in a large opening of the abdomen with evacuation of the liquid; the other procedures are accessory and only have a very little influence as to the result. The cure is not simply temporary; its continuation has been confirmed after 2, 12 and 25 years. In certain cases, the autopsy showed a complete disappearance of the tubercles, that is to say, *restitudio ad intergrum.* Before examining the results given by surgical intervention in tubercular pertonitis in children, the writer gives a case of his own, and a short résumé is here given. Anna K., aged 3 years and 9 months, entered the hospital Sept. 8, 1890; a brother died of tuberculosis. The patient had whooping-cough at 2 years, which lasted five months. Since July, 1890, diarrhœa, and abdomen swollen; dull; fluctuating. Temperature running from 38° to 39° C. Sept. 11, chloroform; an incision 5 centimetres long between the pubis and umbilicus; evacuation of the liquid; drainage; the wound closed by deep sutures; iodoform dressing; a piece of peritonæum examined by the microscope showed tubercles composed of giant cells, etc. Sept. 23, the sutures were removed, and the wound united by first intention; the temperature slightly lower. Sept. 27, icterus, fever, cough, œdema of the malleoli. Sept. 30, all the symptoms were better. Oct. 4, the fever persists, abdomen enlarged and dull in the lower region. Oct. 10, the abdomen was opened again on the line of cicatrization; both folds of the peritonæum were united by a gelatiniform substance covered with tubercles having a car-

tilaginous consistence. Abdomen was washed out with boracic acid solution; a thin layer of iodoform dressing; drainage. Oct. 22, the fever had fallen, abdomen diminished in size, patient gained weight, cure. The icterus noted in this case was only transient epidemic. Writers have wished to explain the action of laparotomy by the influence of light on the bacillus of Koch. But in cutaneous affections, this action of light, although much more prolonged, does little to prevent the evolution of the affection. König explains the action by suppression of the peritoneal cavity. The above case corroborates this hypothesis. In spite of the frequency of tubercular peritonitis in childhood, laparotomy has only been performed twenty times, including my case; twice in children, aged 3, once at 8 years, twice at 5 years, twice at 10 years, three times at 11 years, twice at 12, four times at 13 years, twice at 14 and once at 15; of these cases 6 were boys and 13 were girls. In every one of the twenty cases the result was favorable, and the patient was cured. In two cases there was a relapse; a second operation was performed at an interval of one month and was followed by success. Laparotomy is one of the best methods for the treatment of tubercular peritonitis in children.—*Alexandroff, in Wracht—Amn. Gyn. Pæd.*

HYGIENE.

PASSAGE OF THE BACILLUS OF TUBERCULOSIS FROM THE MOTHER TO THE FŒTUS.

Birch-Hirschfeld and Schmorl (*Beitrage zur Path. anat. und zur allg. Path.*, 1891, p. 429) have put on record a case which they claim is the first in which it has been definitively proved that in the human subject tubercle bacilli pass from the mother to the fœtus. The patient was a young woman who, shortly after the commencement of her first pregnancy, began to show signs of phthisis; these gradually became more marked, and she succumbed at the seventh month of her pregnancy. Immediately after the death of the mother the fœtus was removed by Cæsarean section. The necropsy on the mother showed abundant evidence of phthisis; not only in the lungs, but in other organs, tuberculosis was detected. Although the fœtus had been alive shortly before the death of the mother, it was dead when it was removed. The chest was at once opened, but there was nothing noteworthy about the lungs. The fœtus was then taken to the laboratory, the surface of the abdomen was washed with perchloride of mercury, and the cavity was opened with sterilized knives. No tubercles could be seen on any of the organs. Minute pieces of the liver, the spleen and the kidney were placed in the abdominal cavity of two guinea-pigs and a rabbit, with all antiseptic precautions. One of the guinea-pigs died in fourteen days, and tubercles were found in different parts of the abdominal cavity. The second one was killed about six weeks after inoculation, as it was clearly ill, and many tubercles were found in the peritoneal cavity. The rabbit lived three months; on its death many tubercles were found in the liver and the lung. Tubercle bacilli were found in the umbilical cord and the blood of the umbilical vein.—*Brit. Med. Jour.*

WARUM ICH NICHT MEHR VEGETARISCH LEBE.

Such is the title of an article containing the renunciation of Dr. Alanus, sent to the *Renish Courier*. He says:

"Having lived for a long time as a vegetarian without feeling any better or worse than formerly with mixed food, I made one day the disagreeable discovery that my arteries began to show signs of atheromatous degeneration. Particularly in the temporal and radial arteries this morbid process was unmistakable. Being still under forty, I could not interpret this symptom as a manifestation of old age, and being, furthermore, not addicted to drink, I was utterly unable to explain the matter. I turned it over and over in my mind without finding a solution of the enigma. I, however, found the explanation quite accidentally in a work of that excellent physician, Dr. E. Monin, of Paris. The following is the verbal translation of the passage in question: In order to continue the criticism of vegetarianism we must not ignore the work of the late lamented Gubler on the influence of a vegetable diet on the chalky degeneration of the arteries. Vegetable food, richer in mineral salts than that of animal origin, introduces more mineral salts into the blood. Raymond has observed numerous cases of atheroma in a monastery of vegetarian friars, amongst others that of the prior, a man scarcely thirty-two years old, whose arteries were already considerably indurated. The naval surgeon, Treille, has seen numerous cases of atheromatous degeneration in Bombay and Calcutta, where many people live exclusively on rice.

A vegetable diet, therefore, ruins the blood-vessels and makes permaturely old, if it is true that man is as old as his arteries. It must produce at the same time tartar, the senile arch of the cornea, and phosphaturia. Having unfortunately seen these newest results of medical investigation confirmed by my own case, I have, as a matter of course, returned to a mixed diet. I can no longer consider purely vegetable food as the normal diet of man, but only as a curative method, which is of the greatest service in various morbid states. Some patients may follow this diet for weeks and months, but it is not adapted for everybody's continued use. It is the same as with the starvation cure, which cures some patients, but is not fit to be used continually by the healthy. I have become richer by one experience, which has shown me that a single brutal fact can knock down the most beautiful theoretical structure."

MEDICAL CHEMISTRY.

A NEW ALKALOID FROM JAVA COCA-LEAVES.

Dr. F. Geisel communicates a note to the *Pharmaceutische Zeitung*, in which he mentions that the narrow-leaved Java coca contains up to 2 per cent. of alkaloids, but only very little cocaine. The principle alkaloids are cinnamyl compounds, besides crystallizable cinnamyl-cocaine, as well as truxilline. From 20 kilogrammes of the alkaloids he, by fractionation, obtained 1 kilogramme of cinnamyl-cocaine, and from the mother-liquor containing the amorphous cinnamyl compounds he has been able to isolate, as a hydrobromide, an alkaloid bearing a great resemblance to the dextro-cocaine which Einhorn prepared from dextro-ecgonine. Of this alkaloid Dr. Giesel has secured 80 grammes. It possesses the characteristics of cocaine and nearly-allied bodies, so far as physiological action on the tongue and behavior towards permanganate are concerned. The hydrobromide and nitrite of the alkaloid showed the same sparing solubility in water as dextro-cocaine does, and, like it, the free base separates as an oil, which, on dissolving in ether, can be obtained in crystals. The alkaloid so obtained melts at 49° C., as compared with 46–47° C., the figure for dextro-cocaine, and 97° C., that of cocaine. The hydrochloride of dextro-cocaine is fairly difficult to dissolve in water, but dissolves more easily in alcohol, and crystallizes from both solvents in needles. The hydrochloride of the new base dissolves easily in water, but with more difficulty in alcohol, and crystallizes from the solutions in small and pretty prisms. Salts of the new body, even in very dilute solution, give a crystalline precipitate with potassium bichromate, whereas similar solutions of cocaine and dextro-cocaine remain clear, or give an oily turbidity. The alkaloid does not affect polarized light. Concentrated hydrochloric acid splits it up into benzoic acid and ecgonine, in the calculated proportions for cocaine, without giving, as in the case of dextro-cocaine, a difficultly soluble intermediate product. In other respects the alkaloid shows differences from dextro-cocaine, and Dr. Geisel's conclusion is that it is an isomer or homologue of cocaine. The author adds some criticism of Hesse's recent work on hygiene, in which he maintains the natural existence of that body.—*Chemist and Druggist.*

PHOSPHORUS MADE BY ELECTRICITY.

The *Birmingham Post* has published an account of a new factory, lately established at Wednesfield by the "Electrical Construction Corporation," for the production of phosphorus by electricity. Patents for the extraction of phosphorus from the raw material had been taken out independently by Dr. Readman, of Edinburgh, and Mr. S. Parker, the managing director, and Mr. A. E. Robinson, F. C. S., the chemist of the Electrical Construction Corporation. These patentees, it appears, have amalgamated their interests, and it is said they have experimentally proved the success of their plans. They are commencing the manufacture on a limited scale, but they have taken land which gives them space to extend their operations largely. At present only a limited number of furnaces are set up, but the machinery provided will be powerful enough to produce an electrical current capable of heating other furnaces when the premises are extended. The engine is of 700-horse power, and attached to it is an alternating dynamo nearly eight feet in diameter. From the dynamo the current is conducted to the furnace, and generates intense heat, by means of powerful arc carbons. The furnace, which is the invention of Mr. Parker, occupies a comparatively small space, being only about eight feet square, and less in heighth. It is fitted with a hopper at the top, which is so constructed that the phosphates and coal can be poured in without any heat or vapor escaping. The furnace being "air-tight," no smoke is generated, and the whole of the ingredients placed

within, with the exception of a little slag, which is drawn occasionally by a process of tapping similar to that at ordinary blast-furnaces, pass away in a vaporous condition through pipes and condensers, where the phosphorus is deposited in such a pure condition that it requires but little refining, though, for marketable purposes, it is afterwards formed into circular cakes. The cost of production is said to be much less than by any other system. The *Post* states that the whole of the patents have been acquired by the Phosphorus Company (Limited), by whom the works will in future be carried on. It may be interesting to state that the estimated consumption of phosphorus throughout the world is about 2,000 tons per annum, and the Wednesfield works hope to place in the market at least half that quantity each year, at a price which may probably have a marked effect upon the price of matches, low as they are retailed at the present day.

NEWS AND MISCELLANY.

REDUCTION IN RAILROAD FARES.

The Trunk Lines, the New York and Boston lines, the Southern Passenger Association, and the Central Traffic Association will transport persons from points on their lines to Washington and return at the price of one and one-third the regular fare on the following conditions:

1. There must be an attendance at the meeting of not less than 100 persons holding special certificates.

2. The going ticket must be purchased within three days before the opening date of the meeting.

3. Each person availing himself of the concession must pay full first-class fare going to the meeting, and must obtain a certificate from the agent of whom the ticket is purchased.

4. Those holding such certificates, when countersigned by the proper officer at the Congress, can obtain return tickets at one-third the highest limited fare.

Certificates are not transferable, and the return tickets secured upon certificates are not transferable. If any of them are sold or transferred, they must be redeemed at the highest first-class rate by the person making such sale or transfer.

No refund of fare will be made on account of any person failing to obtain a certificate.

Those who wish to avail themselves of this method of obtaining reduction in fares, should present themselves at the office for certificates and tickets at least 30 minutes before departure of trains.

It is absolutely necessary for each passenger before starting to obtain a certificate from the ticket agent of whom the going ticket is purchased, otherwise he can obtain no reduction in the return fare.

There will be no stop-over privileges on the return tickets, which must always be by the same route as the going ticket.

Members may obtain tickets on these conditions for their wives and members of their families, as well as themselves.

THE LAY OF THE LYMPH.

The following appropriate lines have appeared in the *British Medical Journal:*

Who'll kill the bacillus?
"I," said Herr Koch,
"With my lymph and syringe,
I'll kill the bacillus."

Alas! Doctor Koch,
With false hopes you fill us;
For firm as a rock,
Holds the field—the bacillus.

And assembled bacilli
Through a cultur'd bacillus
Say, "We're not quite so silly
As to let Herr Koch kill us."

"Must admit," owns Herr Koch,
"I can't kill the bacillus,
Only cut off the stock
Of supplies from bacillus."

Replieth Herr Virchow,
"No lack of supply;
From one organ driven
To another he'll fly."

So some vow with a twinge,
"No more shall you drill us
With your lymph and syringe,
You can't starve the bacillus."

ILLINOIS ARMY AND NAVY MEDICAL ASSOCIATION.

"The Illinois Army and Navy Association" was organized at Springfield, Ill., June 26, 1890, with Dr. Hosmer A. Johnson, of Chicago, as President, and Dr. John H. Rauch, of Springfield, as Secretary. The objects of the society are the promotion of social, historical and medical subjects con-

nected with the late war. All reputable physicians now living in Illinois, whether in practice or not, who served in the army or navy, during the late war, and all who were surgeons or acting assistant surgeons, who were with Illinois troops, and are now non-residents of the State, are eligible to membership. At the second meeting of the association, held in Springfield, May 18th and 19th, 1891, Dr. John H. Rauch was elected president, vice Dr. Johnson, deceased, and Dr. Edward P. Bartlett, of Springfield, Ill., was elected secretary. The association adjourned to meet in Chicago, at the time of the unveiling of the Grant Monument. This adjourned meeting will take place at the Grand Pacific Hotel, Chicago, Oct. 7th and 8th, 1891. The unveiling of the monument will occur Oct. 7th, at 2 P. M. Half fare rates can be had to Chicago at that time, upon all railroads.

MODERN MEDICINE.

First they pumped him full of virus from some mediocre cow,
Lest the small-pox might assail him, and leave pit-marks on his brow;
Then one day a bull dog bit him—he was gunning down at Quogue—
And they filled his veins in Paris with an extract of mad dog;
Then he caught tuberculosis, so they took him to Berlin,
And injected half a gallon of baccilli into him;
Well his friends were all delighted at the quickness of the cure,
Till he caught the typhoid fever, and speedy death was sure;
Then the doctors with some sewage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as of course he had to do,
There came along a rattlesnake and bit his thumb in two;
Once again his veins were opened to receive about a gill
Of some serpentine solution with a venom in it still;
To prepare him for a voyage in an Asiatic sea,
New blood was pumped into him from a leper'ous old Chinee;
Soon his appetite had vanished, and he could not eat at all;
So the virus of dyspepsia was injected in the fall;
But his blood was so diluted by the remedies he'd taken
That one day he laid down and died, and never did awaken;
With the Brown-Sequard elixir they tried resuscitation,
He never showed a symptom of reviving animation;
Yet his doctor still could save him (he persistently maintains,)
If he only could inject a little life into his veins.—*Puck.*

PURIFICATION OF CHLOROFORM.

According to a telegram in the *Times* of June 24th, which has a somewhat commercial smack, M. Raoul Retet is arranging with manufacturers of chloroform in Berlin for the purpose of purifying this anæsthetic by means of intense cold—freezing it, in fact. He produces it absolutely pure, it is said. By his process he is able to reduce its temperature to—130° C. The impurities can, it is stated, be separated at—23° C. (the melting point of chloroform is—70° C.) We doubt whether this purification will rid it of its inherent dangers as an anæsthetic. Good chloroform as now manufactured from pure acetone is probably as chemically pure as commerce can supply it. Absolute chloroform has hitherto proved very unstable.

DEATH AFTER A DOSE OF SALOL.

Salol is usually considered a tolerably innocuous drug, but there are not wanting clinical observations which tend to show that, under certain circumstances at least, its use may be followed by dire results. Thus a case was some time ago reported by Aufrecht and Behm in which death followed its use in acute endocarditis, and more recently Dr. Chlapowski has published in a Bohemian medical journal an account of a case in which a similar fatal result followed a fifteen-grain dose ordered to a patient who was suffering from severe gastric symptoms, and who was being examined by Ewald's method. After taking the salol the patient became restless and unconscious, the pupils dilated, the pulse became irregular, there was constant vomiting, and the urine became dark, and contained salicylic acid. Death occurred twelve days later. At the necropsy there were found gastritis and hæmorrhagic enteritis, a gastric ulcer cicatrized at the cardiac end, chronic endometritis, and a cyst of the ovary. No doubt was entertained that the salol had caused the symptoms of poisoning.—*Lancet.*

THE RESIGNATION OF PROF. KOCH.

Dr. Robert Koch, though he has resigned his Professorship of Hygiene on his appointment as Director of the newly-founded Institute for Infectious Diseases at Berlin, still retains the title of Honorary Professor Ordinarius, which gives him the power of lecturing in the University if he sees fit.

FRACTURED RIBS IN THE INSANE.

The words heading this paragraph are the title of a highly instructive memoir by Dr. Claye Shaw in the new volume of the *St. Bartholomew's Hospital Reports*. He observes that nothing gives so bad an impression of the management of an asylum as the occurrence of fractured ribs amongst its inmates. Hence he endeavors to throw some light on the pathology of broken ribs in the insane. He has made experiments, and tabulates the weight required to cause fracture of the rib, and the seat of the fracture. He concludes that a considerable difference is found to exist not only in the weight of the ribs on the two sides of the body, but also in the average breaking weight. The lighter rib is often found to bear the heavier weight, and there appears to be no proportion between the weight of the rib and the number of pounds that it is capable of sustaining, whence it would appear that physical conditions of structure have no more to do with the strain-resisting power than chemical change. Persons suffering from disease of the heart or blood vessels bear less strain than others. Persons suffering from advanced constitutional disease, such as phthisis, may have ribs that support a strain much above the average, and hence there is no direct relation between constitutional strength and that of the ribs. When a blow causes fracture, this is dependent not so much on the weight of the rib and its power of bearing strain as on other conditions. Altogether the idea that the ribs of the insane are more brittle than those of the same is true only to a very limited extent, and is almost confined to those affected with degeneration of the circulatory system. Dr. Shaw rightly notes that he has not had the opportunity of testing the breaking weight of the ribs of general hospital patients. Attendants at asylums, he observes, knowing the penalties, are very careful not to give violent blows when patients are in such a position that the natural elasticity of the ribs can act, and that, even if they did, such blows would not cause fracture. Whether the person be sane or insane, a slight blow given when the body is in a certain position will cause fracture, and when that does occur, it is more often than not done accidentally—*Brit. Med. Jour.*

THE COMPOSITION OF THE LONDON FOG.

An important paper on London fog was read at the Hygienic Congress by Dr. Russell, who has made it the subject of special study. He says, first of all, that the number of fogs is constantly increasing in the metropolis. From 1870 to 1875 there were 93 of them; from 1875 to 1880, 119; from 1880 to 1885, 131; and from 1885 to 1890, 156. This is the direct result of the increased consumption of coal, which amounted to 6,400,000 tons in 1890 as against 4,400,000 in 1885. Dr. Russell claims to have proved that increased smoke makes fogs more frequent, as well as thicker, by adding to impurities in the air. Fogs, he adds, are especially likely to occur in still, cold weather. The composition of London fog is as follows:

Carbon,	39.0
Hydro-carbons,	12.3
Organic traces,	2.0
Sulphuric acid,	4.3
Hydrochloric acid,	1.4
Metallic iron and magnetic oxide,	2.6
Ammonia,	1.4
Mineral matter, chiefly silica and ferric oxide,	31.2
Water,	5.8
	100.0

The actual effect of fog upon human life is uncertain. It has been noticed, however, that fogs in cold weather are accompanied by a rise in the death rate. This may be due chiefly to the cold, but it must be remembered that cold is intensified by fog, which obstructs the rays of the sun. There is no doubt of the injurious effect of fog upon vegetation, which is affected, even at a distance of thirty or forty miles from London. It is the sulphur, probably, that does the mischief. There seems to be no room for doubt that the number of fogs will increase in London in exact proportion to the growth of the city, unless some means are discovered of getting rid of the smoke, which comes, it must be added, from the domestic hearths, not from factories. How this problem will be solved, if ever, no one can now tell. Two plans are suggested, one, the use of improved grates, the other, the substitution of gas for coal fires.